DERMIC MEMORANDA.

WILLIAM GEMMELL, M.B.

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An Introduction to the Study of Skin Disease, with Special Reference to the Exanthemata.

BY

WILLIAM GEMMELL, M.B.,

Resident Medical Officer, Kennedy Street Fever Hospital,
Late Senior Assistant-Physician, City of Glasgow Fever and Smallpox Hospitals, Belvidere.

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PREFACE.

These memoranda can claim, in the nature of things, but a partial originality, though much has been written entirely from personal observation. They can add nothing to the knowledge of the experienced physician, nor are they ambitious of doing so; they merely endeavour to point out to the *student*, and that in the simplest and most direct way, the essential facts regarding the commoner diseases of the skin. They have been found, at first by myself, and later by others, of some assistance, both at the bedside and before examination; and now seek a wider sphere of usefulness, not with the idea of replacing or interfering with clinical instruction, but with the hope that they may both assist and supplement it. No description, however, can equal in value to the student the seeing and touching and dealing personally with disease, and each opportunity for doing so should be utilised to its fullest extent.

A short section on rashes due to the action of drugs will be found to deal with subjects of great importance, but which receive, as a rule, only scant notice in the usual systematic authors.

It will be observed that the portion devoted to treatment is, in parts, somewhat meagre. This is designedly so; the blank spaces are meant for notes on treatment to be made by the student himself in the class-room or dispensary.

I have to express my thanks to Mr. Jonathan Hutchinson and to Dr. C. Fred. Pollock for permission to make use of the illustrations in this work.

W. G.

Kennedy Street Fever Hospital,
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DERMIC MEMORANDA.

INTRODUCTORY.

It may not be out of place to refer very briefly to the *structure* and *function* of the skin before proceeding to deal with its *pathology*.

The skin consists of two layers, one placed above the other; the lower is the *derma* or *true skin*, the upper the *epidermis* or *scarf skin*.

The *derma* or *cutis vera* is largely composed of white fibrous tissue, which in its deeper part gradually merges into the subjacent subcutaneous tissue. Its superficial part is thrown into papillæ, each of which receives its own special capillary blood vessel, and is, moreover, surrounded by a very fine network of other similar capillaries.

The *epidermis* or *scarf skin* is itself subdivided into two layers; a lower or *mucous* layer (*rete mucosum*, or *Malpighian layer*) which is laid immediately above the cutis vera; and an upper or *horny* layer, which is that we meet with on the surface of the body.

Thus—

Skin = { Epidermis (scarf skin.) = { Horny layer. / Mucous layer. } / Derma (true skin). }

The *horny layer* of the epidermis consists of flattened cells, arranged in closely adherent layers, one above the other. These cells are constantly being renewed from the mucous layer below,

and constantly being cast off as they reach the surface in the form of fine desquamation.

The *mucous layer* consists of large flat nucleated cells, which decrease in size and flatness as the derma is approached. The smallest and most active of these cells are somewhat elongated in shape, and are immediately in contact with the derma itself. When from any cause irritation of the mucous layer occurs, serous fluid is poured out, and the horny layer is separated from the mucous layer by the effusion. Thus vesicles and bullæ are formed.

The *glands* of the skin are of two kinds, *sebaceous* and *sudoriparous.*

The *sebaceous glands* are situated close to the surface of the skin, and usually open by means of a small duct into a hair follicle. Their secretion is oily, and is termed sebum.

The *sudoriparous glands* are situated more deeply, are much more numerous, and open directly upon the surface. The perspiration is not wholly produced by them, but is the joint product of *both* sebaceous and sudoriparous glands.

The study of diseases of the skin is important, because they (1) *are common;* (2) *are easily observed;* (3) *largely affect the health and happiness of the patient;* and (4) *aid us in diagnosing internal maladies.*

Skin diseases have often been described and tabulated, and the different names given to them by different authors are largely due to these facts (1) that sometimes only one, and sometimes more than one constituent of the skin is involved in the disease; (2) that the skin differs in relative character (amount of thickness, proportion of glands, hair, &c.) in different parts; (3) that the functions of the skin are often modified, or impaired, in diseased conditions; (4) that more than one disease may be present at the same time.

In examining patients suffering from skin disease, notice—(1) *situation* of disease, (2) *size* of its constituents, (3) *shape*, (4) *smell* (favus), (5) *colour*, (6) *consistency*, (7) *distribution*, (8) *duration*, (9) *diathesis*, (10) *heredity*, (11) *habits*, (12) *occupation* of patient, (13) *onset*, (14) *persistency*, (15) *pain.*

The following points are also of great importance :—

(1) Be absolutely certain that you see *the full extent* of the eruption.

(2) Be sure you do not mistake *stages* of disease for *varieties* of disease, and *vice versa*.

(3) Determine whether the disease is *uniform* or *multiform*.

(4) Determine the true *site* of the disease, *i.e.*, whether it be superficial only, or whether the deeper structures are involved.

(5) Distinguish between what is *essential* (the true skin-affection) and what is *superfluous* (that produced by scratching, flea-bites, &c.).

(6) Carefully enquire into any known *hereditary condition* affecting the patient (as syphilis, neuroses).

(7) Remember that the greatest possible amount of sympathy exists between the stomach and the skin, hence the condition of the *digestion* must always be enquired into.

(8) *Never fail to use the microscope frequently;* it should always be referred to when in doubt on a point in diagnosis.

Skin diseases in *situation* are—

1. *General*, occurring *anywhere* over the surface of the body.
2. *Local*, occurring in special parts.
3. *Universal*, occurring *everywhere* over the surface of the body.

There are *three universal* skin diseases.

1. *Lichen ruber*, papular (page 19).
2. *Pemphigus foliaceous*, bullate (page 29).
3. *Pityriasis rubra*, scaly (page 35).

The lesions of the skin are *primary* and *secondary*.

PRIMARY LESIONS OF THE SKIN.

1. *Maculæ* are simply *Stains*. They are neither elevated nor depressed, and may either fade on pressure (Erythema) or not (Freckles). Small maculæ the size of flea-bites are termed *petechiæ;* when two or three petechiæ run together they form *vibices;* still larger stains, which undergo colour-changes, are

ecchymoses. A *stigma* is a vivid stain which fades on pressure, but which returns when the pressure is removed. An *areola* or *halo* is a red ring which surrounds a definite spot of inflammation.

2. *Erythema.*—All true eruptions are primarily due to a loss of tonicity in the blood vessels, which in turn leads to the presence of an increased quantity of blood in the papillary layer of the skin. There is an hyperæmia, in point of fact, followed usually by desquamation, and the desquamation is in proportion to the hyperæmia. "Ubi irritatio ibi fluxio." If the hyperæmia be long kept up it is followed by exudation, which, when limited forms the

3. *Papule* or *Pimple.*—Papules are little elevations which are more or less consistent throughout, feel solid to the fingers, and vary in size from a pinhead to a pea.

4. *Pomphi* or *Wheals* are solid bodies slightly raised above the surface of the skin, *evanescent;* and vary from a pea to a shilling in size. They are pale or white in the centre, and rosy-red at the periphery, and are often accompanied by itching and stinging. They are caused by sudden hyperæmia of the vessels (excitement, exercise), which is followed by the effusion of serous fluid; when the cause is removed the vessels regain their tonicity, and the fluid is quickly absorbed. Their appearance or disappearance is often due to disturbance of the vaso-motor nervous system. Example, Urticaria.

5. *Vesiculæ* or *Vesicles* are papules containing a *fluid* exudation; *alkaline* in reaction, clear at first, but latterly becoming opaque or tinged with blood. Unilocular or multilocular (vaccination vesicle) they appear on an inflamed base, are prominent (except when on palm or sole), and vary in size from a pinhead to a pea; they occur between the rete mucosum and horny layer of the epidermis. They may (1) rupture, when the fluid which escapes, dries, and forms a crust; or (2) become pustular.

Sudamina are minute vesicles occurring in parts where there is profuse perspiration. They are small isolated *accumulations of sweat between the layers of the epidermis;* their contents are *acid* in reaction. (See *Hyperidrosis*, page 43).

6. *Bullæ* or *Blebs* are large vesicles. The fluid in them resembles that in vesicles, but is more abundant. They are often

multilocular, and may have no areola. Usually egg-shaped. Size from that of a pea to that of a walnut, rarely larger. Example, Pemphigus.

7. *Pustulæ* or *Pustules* are accumulations of pus in or below the skin. They usually commence as papules, and then pass through the vesicular and pustular stages, to end in scabs, or they may be pustular almost from the outset. The accompanying inflammation is more intense, and the thickening and crusting more marked than in any previous lesion. Size and shape vary. Situations—papillæ of cutis vera, sebaceous and hair follicles. Example, Eczema pustulosum.

8. *Squamæ* or *Scales* are dry masses of epithelial debris, separated from the tissues below. When thin and bran-like they constitute *Furfura* or *Scurf*. Example, desquamation of measles. Slightly larger scales are found in *Pityriasis;* the largest scales occur in *Psoriasis.*

9. *Tuberculæ* or *Tubercles* is an unfortunate term when applied to any skin lesion, as tending toward confusion with a very different class of diseases, namely, those associated with "tubercle" of various internal organs. The term "nodule" is without the above objection.

Nodules, then, are solid elevations of the skin, more or less permanent, and ranging in size from a pinhead to a walnut. Their shape is variable, but they are usually circular. They may be situated in the deep layers of the skin, and even in the subcutaneous tissue, and often coalesce. They are apt to take on malignant characters, or to ulcerate and produce destructive changes. Example, Lupus. (See also *Milium*, page 45, and *Miliaria*, page 43.)

SECONDARY LESIONS OF THE SKIN.

1. *Excoriation* is a partial or complete removal of the epidermis. It leaves no scar.

2. *Ulceration* is inflammation, with progressive destruction of the true skin, and even muscles and bone. It leaves a scar.

3. *Scabbing* or *Crusting.*—Scabs are concretions formed by the gradual collection and adhesion of the *debris* of an ulcerating surface.

Serum, sebum, pus, blood, and epidermis, with foreign matters of different sorts, may enter into their composition in varying degree.

4. *Cicatrization.*—Cicatrices or scars are produced by the formation of white fibrous tissue in the place of some tissue previously destroyed. They differ from true skin in that they contain (1) no hair cells; (2) no pigment cells; (3) no sebaceous follicles; (4) few blood vessels and nerves. They may always be made prominent by slapping or rubbing.

MACULAR INFLAMMATIONS.

1. Purpura.—Extravasations of blood, as petechiæ, vibices, or ecchymoses, are sometimes seen beneath the skin in smallpox, typhus, and measles, and such are often termed "purpuric." Sometimes with these there occur similar extravasations into the solid organs, and beneath serous and mucous surfaces. Such may be noticed in scurvy and hæmophilia in addition to the diseases already mentioned.

Purpura itself (*Morbus maculosus Werlhofii* of the Germans) is a disorder accompanied by the appearance of petechiæ, vibices, or ecchymoses in the skin, but which is unconnected with any local mischief or specific disease. Pressure on the stains makes little impression. Purpura occurs at all ages, but is commonest in young children. It is very apt to recur, and treatment is, at the best, unsatisfactory. Eruptions like it are produced by the prolonged administration of drugs, such as chloral hydrate, potas. bromid., potas. iodid., cantharid., ol. crotonis.

Cause—very obscure.

M'Call Anderson believes it to be due to digestive derangements. *Samson Gemmell* looks toward the condition of the blood itself, which he examines with the hæmacytometer and hæmoglobinometer. A deficiency in the number of the red, and an increase in the number of the white, blood corpuscles, with a diminution in the quantity of hæmoglobine, has been found. Nerve-diseased conditions (locomotor ataxy, sciatica, neuralgia) sometimes accompany it. *Bristowe* thinks it due to a morbid condition of the capillary walls, which rupture, or at least permit the blood to escape into the tissues.

Treatment.

Constitutional.

1. Light diet (milk).
2. Wine.
3. Relaxation of bowels.
4. Arsenic most valuable.
   Turpentine.
   Ergot.
   Acetate of lead.
   Gallic acid.

℞ Liq. arsenici hydrochlor., Mxxx
Ext. ergotæ. liq., ʒiv
Tr. ferr. perchlor., ʒij
Syr. zingibr., ʒi
Aq. menth pip., ʒiij
Aq. destil, ad. ʒvi

Sig. ʒss. ter in die.

Local.

Purpura—

In *Purpura rheumatica* put joints at rest and clothe with cotton wool.

Ephelides—

The following lotion is said to have a good effect:—

℞ Hydrarg. perchlor., gr. ij
Mist. amygdalæ, ʒiv
m

Sig. apply at bedtime.

In all forms of Erythema avoid the administration of arsenic.

Erythema—

As a rule, local applications should be astringent and sedative.

℞ Lanolini, ʒi
Glycerini, ʒss
Ung. zinci. oleat., ʒi
m bene

Sig. Apply morning and evening.

Gently wash with *cold* water and *good* soap, dry well, apply:

℞ Ung. plumbi. oleatis.

Varieties—three are described.

(1) *Purpura simplex.* In it the hæmorrhages are minute, and the constitutional disturbance is not great.

(2) *Purpura hæmorrhagica* is accompanied by bleeding from the mucous membranes (nose, mouth, lungs, kidneys, bladder). The retina may become ecchymosed; and death takes place from hæmorrhage into the substance of the brain.

(3) *Purpura rheumatica*, or *Peliosis rheumatica*, begins with febrile symptoms, loss of appetite, and pains in the limbs, especially *in the knees.* There is some pyrexia, which subsides, however, after the full development of the eruption.

2. Ephelides (Freckles) are due to a hyper development of the normal pigment of the skin. They are popularly attributed to exposure to the sun's rays. They are of no importance beyond the disfigurement they cause when in large numbers.

ERYTHEMATOUS INFLAMMATIONS.

1. Erythema *is a superficial hyperæmia of the skin, without elevation or exudation.* The skin is rosy-red in colour (the redness disappearing on pressure, but quickly returning), hot (due to the increased supply of blood), tingling (if acute), or itching (if chronic), but always smooth and unbroken. There is no diapedesis: the blood is still in the capillaries.

Varieties—

(a) *Erythema simplex* is a reddened patch of skin, unraised above the surface, identical in appearance with the early stages of Erysipelas (which see), but differing from it in cause and results. It is produced by irritation (friction, heat, uncleanliness), often occurs in children, and may be mistaken for the rash of scarlet fever. Digestive derangement is also a cause. It comes and goes, leaving no mark behind, and is commonest on parts exposed to cold winds.

(b) *Erythema intertrigo* occurs on the opposed surfaces of tender skin (below pendulous mammæ, in the folds of the skin in the necks of fat babies, between thighs and scrotum, between nates, behind ears, &c.). The opposed surfaces may become raw, moist, and irritable from the acid perspiration which is poured

Treatment.

Constitutional.	*Local.*
	Erythema—continued.
	If dry, dust with
	℞ Pulv. amyli.
	Pulv. lycopodii, āā ʒss
	Wash with lotio. ac. carbol. (1-40) and protect with wood wool or Gamgee.
Treat the *cause* of the dropsy.	
If the digestion be at fault give Vichy or Friedrichshall waters, or	
℞ Bism. subnit.	
Sod. bicarb., āā gr. x	
Pepsin. porci, gr. ij	
Pulv. zingib., gr. iij	
Mitte tales xij	Sponge with
Sig. One thrice daily.	℞ Spiriti. vin. rect., ʒss
	Aq. Oi
Nourishing, easily digested food; iron, wine, tonics.	1. Bathe first with *cold* water.
	2. If that hurt, try *hot* water.
	3. Paint with flexible collodion, which allow to dry, or
	4. ℞ Liq. plumb. subacetat., ʒss
	Tinct. opii, ʒiij
	Aq., ad. ʒx
	℥
	Sig. Apply on fomentations.
	Milton recommends vapour baths.
	℞ Ung. bism. oleat. ʒij
	Sig. Apply twice daily.
Regulate diet, give tonics.	

out, and which macerates the epidermis. It occurs oftenest in hot weather, and when neglected goes on to form *Eczema intertrigo.*

(c) *Erythema lævé* is the blush which occurs on œdematous parts (oftenest in the legs), and may be followed by true erysipelas, gangrene, or sloughing. It is accompanied by tenderness and tingling or aching.

(d) *Erythema multiforme* includes several sub-varieties, and may be either papular, vesicular, or nodular in form, or consist of all three forms mixed up in varying proportions. With it there is considerable itching and tenderness on pressure. It includes—

(1) *Erythema papulatum*, where the eruption consists of small flat papules (really a Lichen, which see);

(2) *Erythema iris*, when it occurs in successive rings which differ in colour, and are separated by zones of healthy skin.

(3) *Erythema circinatum*, or *annulare*, where the patches are pale in the centre and red at the periphery.

(4) *Erythema marginatum*, or *gyratum*, when the patches are large and sinuous, or broken into segments of a circle. The latter condition occurs usually on the back of the hands and dorsum of the feet, and is symmetrical.

(e) *Erythema nodosum* is an eruption of large, oval, tense, shining spots, red, purple, or blue in colour, and intensely painful. These spots appear suddenly, but are slow to fade, and leave behind them greenish or yellowish stains, somewhat resembling those which follow an ordinary bruise. They come in crops, and appear usually on the arms and legs; they occur oftenest on the shin-ridge, and their long axis is parallel with the long axis of the limb. The irritation which accompanies their presence often affects the lymphatics, and nearest lymphatic glands. When they subside they are followed by desquamation.

This form of erythema is frequently allied with amenorrhœa, dysmenorrhœa, and rheumatism. It is not usually fatal. Its cure depends on the removal of its cause.

(f) *Erythema fugax* is the name applied to the flitting, transient patches seen on the faces of hysterical and dyspeptic patients.

(g) *Erythema roseola* is an eruption appearing first on the neck and face, and spreading thence over the whole body. It

Treatment.

Constitutional.

If due to digestive derangements, give a brisk emetic, as

℞ Vin. antimoniale, ♏ xlv.; or

℞ Injec. apomorph. hypod., ♏ v.

Then clear out bowels by

℞ Pulv. jalapæ co., gr. xv.-xxv., or enema of soap and water.

In future avoid the offending article of diet.

Asearides to be got rid of, by santonin, castor oil, or enemata of liq. calcis.

Thereafter a simple diet. Exercise in open air to a moderate extent

Local.

Urticaria—

1. *Avoid* warmth, whether in bathing, clothing, or bed clothing. Flannel underclothing is especially to be shunned. Nevertheless, sudden changes in temperature must be guarded against.

Scrupulous cleanliness of skin is an important auxiliary.

2. *Tepid alkaline* baths, say 5 oz. Sod. bicarb. in 10 gallons tepid water.

3. Skin may be sponged with—

(*a*) Dilute Eau-de-Cologne.

(*b*) Dilute rectified spirit and ether in water.

(*c*) Chloral. hyd., 10 gr. ad. ℥i. aq.

(*d*) Ae. benzoici, gr. 40 ad. Oi. aq.

℞ Chloroformi, ♏ 30
Ung. zinei oxide, ℥ij
♏

Sig. Apply on strips of lint.

℞ Ung. bism. oleat.

consists of rose-coloured, flat, slightly elevated circles, running together to form an imperfect network. A passing chill causes the colour to turn violet. It fades momentarily on pressure. It is of little importance, except from its resemblance to *Urticaria* and the *eruption of measles*: and this resemblance is increased by the fact that it is generally preceded by a slight degree of febrile disturbance.

2. URTICARIA or NETTLE-RASH is characterized by the formation of pomphi or wheals (solid elastic eminences, round or oval, pale in centre and red at periphery), which are intensely hot and stinging, especially after a hot bath, and when warm in bed. When they subside they leave neither staining nor desquamation. There are two well-marked varieties.

(a) *Urticaria acuta*, or *febrilis*, is attended with febrile manifestations; and the eruption may either appear for several days each evening, to disappear on the succeeding morning, or it may come out at irregular intervals. It comes suddenly, it goes suddenly, appears in crops, and is very apt to recur. It is commonest on the face, chest, back, and joints; the lips and tongue are seldom affected. Scratching increases the size and number of the wheals. It sometimes occurs in the course of scarlet fever. When severe the symptoms come on rapidly, are grave, and may prove fatal. These are rigors, vomiting, dyspnœa, precordial oppression, and syncope.

Cause—(1) *Direct* irritation of the skin, as by scratching, by the bite of some insects, or by the "stings" of medusæ while bathing.

(2) *Indirect* irritation of the skin, by the ingestion of shellfish, cheese, pastry, strawberries, tomatoes; drugs, as copaiba; the presence of worms in the intestine has been given as a cause.

(b) *Urticaria chronica*, or *evanida*, or *perstans*, is not attended with fever, and may or may not follow an attack of the acute form. It is simply Urticaria persisting for months or years, successive crops of wheals appearing during all that time. The skin acquires a bad habit, which it keeps up very persistently: the whole condition recurring on exertion or excitement. This variety is specially apt to occur in nervous persons. Mental emotion, hysteria, and uterine derangements are also causes.

3. ECZEMA is the most frequent of all skin affections. It is a

Treatment.

Constitutional.

If possible, ascertain if any associated maladies (gout, dyspepsia, &c.) be present; which treat appropriately.

In acute stage—

(1) Regulate bowels.
(2) Milk dict; cooling beverages.
(3) No butcher meat, nor stimulants.

Local.

Eczema—

If redness, pain, and moisture be present, endeavour to (1) restrain hyperæmia and moisture by astringents, and (2) soothe pain by sedatives.

Hughes Bennett's rule.

In dry affections of the skin, use ointments.

In moist affections of the skin, use lotions.

Protect from air.

℞ Pulv. zinci oxidi.
Lin. calcis.
Lanolini.
Paraf. molle, āā ℥i
℔

Sig. Apply on strips of linen.

℞ Ung. bism. oleat.
℞ Ung. zinci oleat.
℞ Liq. carbonis deterg., ℥iv
Paraf. molle, ad. ℥ij
℔

In *Eczema intertrigo.* Ointments or dusting powders.

In *Eczema rimosum.* Avoid washing, use sedative and astringent ointments, and protect by a kid glove.

catarrhal inflammation of the skin, presenting usually a red, irritable, and abraded surface, and discharging an albumino-serous fluid which has the property of stiffening linen, and which readily crusts. The eruption may be vesicular, papular, or pustular, or all three forms may be present; erythema accompanies it. In its later stages the skin becomes dry, scaly, and often fissured. After cure, no cicatrices are left, unless the disease has been of long standing, in which case, in all probability, the deeper structures have suffered. It may be hereditary, and is associated with dyspepsia, gout, varix, and local irritation of any kind. Its course is tedious, and it is very apt to recur. Its prominent characteristics are:—(1) It heats; (2) it is itchy; (3) the skin is infiltrated, pressure upon it producing a yellow coloration (not white, as in Erythema); (4) there are little deep red dots at the orifices of the follicles; (5) crusts are present.

Varieties are very numerous.

Eczema simplex presents a moist, red, abraded surface. If the surface be red and abraded, but dry, it is *Eczema siccum*; if it occur on the scalp it is *Eczema capitis*; on the ears, *Eczema auriun*; on the edges of the eyelids, *Eczema palpebrarum*; on the cheeks, *Eczema faciei*; if it be produced by scratching, it is *Eczema pruriginosum*; if pustules predominate, it is *Eczema pustulosum* (see *Eczema impetigiiiodes*) and is the same as the *Crusta lactea* and *Impetigo faciei* of the earlier writers; if Erythema predominate, it is *Eczema erythematodes*; if the heating be great, it is *Eczema humidum*; if it occur in the folds of the skin (flexures, &c.), it is *Eczema intertrigo*; when scabs predominate, it is *Eczema squamosum*; when it occurs on parts exposed to winds, water, &c. (as hands in winter-time) and commences in fissures, it is *Eczema rimosum* or *fendille.*

Eczema rubrum is more advanced and more severe than any of the above named varieties. The swelling is great, and the condition may be mistaken for Erysipelas (which see). The part is red, hot, and swollen; vesicles appear, which quickly rupture, and discharge an acrid sero-purulent fluid, which increases the irritation. In old people it readily becomes chronic, especially if the veins in the neighbourhood are varicose. If it be acute from the beginning, the constitutional disturbance is great.

Treatment.

Constitutional.

In Chronic Eczemas:

(1) Avoid salt fish and meat, spices, cheese, pastry, porridge.

(2) Moderate stimulation *with food.*

(3) Arsenic in gradually increasing doses till physiological effect is obtained.

In anæmics:

Iron, good food, alcohol.

In Sleeplessness, avoid opium. Give chloral in children; in elderly people hyoscine, but with caution.

℞ Liq arsenicalis, ℥iv
Vin. ferri., ℥ij
Syr. aurantii, ℥i
Trae. calumb., ad. ℥vj
℔

Sig. ℥i ter in die. (℔5 liq. arsen. in each dose).

Local.

Eczema—continued.

In the later stages endeavour to (1) get rid of crusts, and (2) stimulate the indolent surface to healthy action.

Cold water cloths covered with gutta-percha tissue as poultices to remove crusts.

Samson Gemmell recommends:

(1) Soaking crusts in oil, covering the surface with gutta-percha tissue, and subsequently washing off with soft soap.

Hebra recommends (if the part be dry, scaly, and thickened) the application of liq. potassæ once a week; in the interval the use of water-dressings. The caustic removes the morbid secreting surface, and promotes healthy action. In moist eczemas, with the same object, *Fagge* recommends the occasional application of a solution of nitrate of silver, say, 40 gr. to the ounce.

The tarry compounds are good stimulants.

℞ Sol. picis (Guyot).
Glycerini.
Sap. moll., āā ℥ij
℔

℞ Ol. cadini, ℥ij
Ung. cetacei, ℥i
℔

Milton strongly recommends the vapour bath in eczema when the dry stage has been reached.

Eczema marginatum occurs as a round patch on the inner surface of the thigh, chiefly in people who take much horse-exercise. The margins of the patch are elevated. It is said to be due to a vegetable parasite—the *Tinea marginata*—but this is extremely doubtful.

Eczema pilare faciei is the occurrence of a simple eczema on the hairy portions of the face. It may also be called *Eczema impetiginodes*, as the crusts are thick; *Eczema pustulosum*, as it is purulent; *Acne mentagra* (ringworm-like acne), *Impetigo menti* (when on the chin) and *Sycosis non-parasitica* (sycosis without the parasite). These various names are found in various authors, but they really indicate one and the same disease. Thus—

Eczema pilare faciei, or
Eczema pustulosum, or
Eczema impetiginodes, or
Impetigo menti, or
Acne mentagra, or
Sycosis non-parasitica.

Eczema pustulosum, when not very pronounced, may be difficult to distinguish from *Scabies*. The following points may help to distinguish them. But it is important to note that *Eczema pustulosum* and *Scabies* may *both* be present, especially on the hands, at one and the same time.

Scabies.	*Eczema pustulosum.*
Abundant vesicles.	Abundant vesicles.
Occurs often on hands.	Not often on hands.
History of contagion.	No contagion.
Itching very marked.	Absence of itching.
Itching worst at night.	

Eczema pilare faciei is apt to be confounded with *Tinea sycosis*, and *Eczema capitis* with *Tinea favosa*; for the difference between them, refer to the end of the section on *Vegetable Parasites*, page 53.

Treatment.

Constitutional.

Local.

Lichen—

Strict cleanliness, avoid water, clean the surface with stale bread crumbs. Dust with

℞ Pulv. zinci oxidi.
,, amyli.
,, lycopodii, āā ℥i

Regulate bowels: thereafter

℞ Liq. potas, ℥iss
Aq. anethi, ad. ℥viij

Sig. ℥ss.

Lichen tropicus—

If itching be great and *skin unbroken.* (1) Sponge with very dilute ac. hydrocyan.; or (2), sol. cucain hydrochlor., 10 per cent.; (3) lotio. ac. carbolici., 5 per cent.; (4) liq. carbonis detcrg., ℥i. ad ℥j.; or anoint with; (5) ung. creasoti (diluti).

℞ Quin. sulph. gr. v
Tales xij

Sig. One every four hours.

PAPULAR INFLAMMATIONS.

1. LICHEN is an itchy condition of the skin, accompanied by an eruption of reddish papules, distinct or coherent, whose apices are scurfy.

Strophulus, a name now seldom used, is a similar condition occurring in infants.

Varieties—Lichen simplex is really an eczema, for it heats. It should be called *Eczema papulosum*, and classified in that group. It occurs chiefly in summer time, and may be found anywhere on the face, trunk, or limbs.

Lichen strophulosus or *Strophulus intertinctus* is a variety in which the papules are scattered and discreet. It forms the "redgum," or "toothrash" peculiar to infants, and occurs mostly on the face, neck, and arms. It is often associated with digestive disturbances.

Lichen circumscriptus or *Strophulus volaticus* is that form in which the papules occur in small, oval, or circular groups.

Lichen agrius or *Strophulus confertus* is the name given when the papules occur scattered over the body in large irregular groups.

Lichen tropicus or *Prickly heat* occurs very rarely in Britain, but is common in Australia, the west coast of Africa, and both East and West Indies. It is characterized by the *sudden* appearance of small red papules, which are *intensely* itchy, and occur chiefly on the abdomen, buttocks, and thighs. It is most severe in fair-skinned people, and is thought to be caused by excessive perspiration due to extreme heat. It is apt to return in subsequent hot seasons. *Tilbury Fox* regarded it as due to an *inflammation of the sweat glands*, and therefore not a true lichen.

Lichen urticatus is a papular condition occurring in children, and produced primarily by urticaria. There being a predisposition toward morbid formations on the part of the child's skin, the pomphi do not disappear, but become papular in character.

Lichen ruber is a *universal* papular eruption (beginning in papules which are often symmetrical), and composed of individual red elevations, smooth and shining, and set on a red base. There is more or less itching; the skin becomes infiltrated and thickened;

Treatment.

Constitutional.	*Local.*
	Lichen ruber—
	Milton quotes a case of persistent Lichen ruber which for many years resisted both external and internal medication, but which yielded after 6 weeks' daily use of the vapour bath.
℞ Liq. arsenicalis, ℥iss Vin. ferri, ℥iij	
Sig. ℥i in aq. ter in die. post cibos.	*Unna* recommends— ℞ Hydrarg. perchlor., gr. ss Ac. carbol., gr. xx Ung. zinci, ℥i Applied locally.
	Heitzmann of New York recommends a 3 per cent. solution of carbolic acid locally.
	Alkaline baths.
	Prurigo—
Treat cause if you can discover it.	*M'Call Anderson* gives— (1) Warm bath twice weekly; then (2) brisk inunction with
(1) Arsenic in steadily increasing doses. (2) Cod liver oil. (3) Good food; wine.	℞ Picis liquid, ℥i Cret. preparat., ℥ss Glycerini, ℥vij Ung. bism. oleat, ad. ℥vi ℔
	Milton says the relief produced by the vapour bath is both rapid and lasting.
	The following ointments applied locally:— Cucain and vaseline, 10 per cent. Ung. hydrarg. ammoniat. Ung. hydrarg. ox. rubri.
Treat the cause.	*Pruritus.*

the movements of joints are hindered, and fissures are formed at the folds of the skin. The nails are thickened, and on the face the lines of expression are obliterated.

Pathologically it consists in an inflammation of the papillary layer of the cutis vera, and the rete mucosum. The cells in the latter are enlarged and increased in number, and the papillæ are full of round cells, especially near the blood vessels. Epidermic cells accumulate in the hair-follicles. Two kinds of Lichen ruber are described—

(a) *Lichen ruber planus*, papules flat.

(b) *Lichen ruber acuminatus*, papules conical.

2. Prurigo is an intensely itchy condition of the skin, accompanied by the formation of pale slightly-elevated papules, whose apices being scratched off, present little hæmorrhagic points characteristic in appearance. It occurs chiefly on the trunk and *extensor aspects* of the extremities. Much scratching on the part of the patient may develop Eczema, Impetigo, and the like. Its *cause* is obscure. The presence of lice and dirt, the friction of towels or clothes, jaundice, uræmia, have all been blamed for it. *Hilton Fagge* thinks it probable that it may be due to various atrophic changes occurring in the senile skin, including the wasting and ultimate disappearance of the papillæ.

Pruritus is an itchy condition of the skin, unaccompanied by any alteration in its appearance. Frequently occurs in elderly people, when it forms *Pruritus senilis*. The anus, scrotum, and pudenda are common seats. *Habits* have much to do with the causation of it. Dirt, digestive derangements, jaundice, may all occasion its occurrence; locally diabetes, leucorrhœa, pediculi, acari, ascarides, hæmorrhoids, are to be enquired into.

A *prurigiuoid* eruption is one produced by scratching.

Itching as a symptom is prominent in—

Erythema.	Urticaria.	Eczema.
Lichen.	Prurigo.	Pruritus.
Scabies.	Phtheiriasis.	Tinea tonsurans.

VESICULAR INFLAMMATION.

Herpes is an acute inflammation of the skin, attended by the

Treatment.

Constitutional.

Local.

Herpes labialis—

℞ Ac. carbolici, ℥i
Ung. zinci, ℥i
℞ Glycer. boracis, ℥i
Aq. rosæ, ℥ij

Herpes palpebralis and *Herpes auricularis*—

℞ Glycer. ac. tannici, ℥i

Herpes præputialis—

Bathe with
℞ Liq. calcis.

Cleanliness, dusting powder.

Herpes pudendalis. See *Herpes præputialis.*

production of groups of distinct vesicles, each of which is situated upon an inflamed base; their size varies from a pinhead to a pea, and the ordinary course of their formation is as follows:—

A limited area of redness, round, oval, or irregular in shape, first appears. This quickly becomes studded with papules, which rapidly vesiculate, and in twenty-four hours have attained their full development. There is much tingling, itching, or heat in the affected area during the early stages of the attack: the papules themselves are set closely together, and as they vesiculate may become conjoined, thus forming bullæ of varying size and shape. Their contents are at first limpid and pale, but may become dark from admixture with blood, or yellow from suppuration. After existing for two or three days, they dry up, and form thin gummy scales, which, in a few days more, become detached, leaving a slightly reddened surface beneath. The whole condition lasts for a few days only as a rule; seldom beyond two or three weeks.

Pathology. Hyperæmia and œdema of the papillary layer of the skin occurs in the first place, followed by an exudation of serum, which collects in the rete mucosum, separating its cells from one another. Individually each vesicle is composed of a network made up of these contorted and elongated epidermic cells, with clear spaces among them. In the serous contents, leucocytes are found, and these may accumulate till they end in the formation of pus. If the papillary layer of the skin be destroyed, on healing a cicatrix will be left.

Coats classes Herpes among the tropho-neuroses of the skin, and seems to think that trophic centres exist in the posterior roots of the spinal nerves, and intervertebral ganglia. Injury to a nerve, as by gunshot or other wound, disease of the spinal cord, as in locomotor ataxy, and various cerebral affections are all frequently accompanied by herpetic eruptions.

Varieties—

(1) *Herpes labialis* occurs on the lips and at the angles of the mouth, and is accompanied by smarting pain and slight febrile disturbance. It is frequent in spring and autumn, and commonly accompanies *catarrh*, *pneumonia*, and some forms of *fever*, especially cerebro-spinal fever.

(2) *Herpes palpebralis* occurs on the eyelids.

Treatment.

Constitutional.

(1) A light diet.

(2) Regulation of bowels, say by Carlsbad salts.

(3) Nerve tonics (*quinine* very useful here).

(4) In insomnia, morphia hypodermically acts well.

(5) Change of air.

Avoid arsenic.

Local.

Herpes zoster—

(1) Poultice to relieve pain, then apply

(2) Ung. bism. oleat. or other sedative ointment or lotion.

Keep the affected part free from friction if possible.

(3) *Herpes auricularis* is found on the pinna of the ear.

(4) *Herpes præputialis* is occasionally to be seen on the prepuce of males, who permit smegma to accumulate underneath the foreskin. The irritation set up by the retained secretion, may go on to form several small deep ulcers, and these, though simple enough in origin, have sometimes been mistaken for chancres.

(5) *Herpes pudendalis* occurs on the labia of the vulva.

(6) *Herpes iris* is the name given to a variety in which the eruption arises in concentric rings, upon a gradually enlarging erythematous disc. It is found commonly on the back of the hand and wrist, at the ankles, and on the dorsum of the feet. It may occur on the trunk.

(7) *Herpes zoster*, or *Zona*, or *Shingles* is the most important variety of the group. In it the vesicles appear simultaneously over the area of distribution of one of the cutaneous sensory nerves. It is limited in extent, and usually preceded and followed by acute neuralgic pains. If not scratched it leaves no mark, and it is not likely to recur; occasionally, however, it lasts for years. When it does so, the inflammation penetrates deeply, disappears slowly, and leaves permanent scars.

The most frequent seat of *Zona* is on the chest or abdomen, where it follows the course of one of the cutaneous branches of the intercostal nerves. Hence it is often *unilateral*. It is also common above the orbit over the branches of the 5th nerve.

Nine regions are described—

(a) *Zona facialis*; parts supplied by the 5th nerve; conjunctiva may be involved.

(b) *Zona occipito-collaris*; over the distribution of the great and lesser occipital, and great auricular nerves.

(c) *Zona cervico-subclavicularis*; over the distribution of the supra-sternal, supra-clavicular, and supra-acromial nerves.

(d) *Zona cervico-brachialis*; over the distribution of the brachial plexus, viz., shoulder, upper arm, forearm, and hand.

(e) *Zona dorso-pectoralis*; over the distribution of the 3rd, 4th, 5th, 6th, and 7th dorsal nerves.

(f) *Zona dorso-abdominalis*; over the distribution of the 8th, 9th, 10th, 11th, and 12th dorsal nerves.

(g) *Zona lumbo-inguinalis*; over the distribution of the upper

Treatment.

Constitutional. *Local.*

Pemphigus—

The cure is never rapid, and the disease is very apt to recur.

Brandy.
Strong meat broths.
Scraped raw beef, internally.

Puncture the bullæ, then keep dry with dusting powders used frequently.

Treat Syphilis, as

℞ Hyd. perchlor., gr. $\frac{1}{12}$
Potas. iodid., gr. viij
Syr. aurant., ʒijss
Aq. dest., ʒijss
Sig. ʒss. The dose is for a child six months old.

Weak alkaline baths, or those containing bran or gelatine may be tried.

If not due to Syphilis—

℞ Sol. Fowleri., ♏ xxiv
Aq. cinn., ad. ʒiij
♏
Sig. ʒi ter. in die, for a child below one year of age.

lumbar nerves, viz., from loin to linea alba, over pubis, genitals, gluteal region, and outer aspect of the thigh.

(h) *Zona lumbo-femoralis;* following the course of the external cutaneous, genito-crural, and obturator nerves, viz., anterior and lateral surfaces of the thigh.

(i) *Zona sacro-ischiatica;* follows the cutaneous branches of the sacral plexus.

BULLATE INFLAMMATIONS.

PEMPHIGUS or *Pompholyx* is characterized by the formation of large blebs (bullæ) which contain more or less *opaque serous fluid*, and rest on slightly reddened bases. The bullæ are sometimes as large as a duck's egg, and are *round*, *oval*, sinuous, or irregular in shape. When they first appear they are attended with intense itching, stinging, or burning. Their development may occupy three or four days, but is commonly less. They appear *in crops* on any part of the body, but preferably on the *chest and shoulders*, and when they rupture the resulting crust is thin and dry. If much scratching has been indulged in by the patient, they may become eczematous in character, and such a condition is difficult to get rid of, and very apt to return. The typical bullæ are *tense;* if flaccid, they indicate weak health.

Pathology. *Coats* suspects it to be due to the presence of an irritant in the blood. The whole of the affected epidermis is raised almost simultaneously, and thus the individual bullæ are not divided by septa into loculi. If the bleb remain unruptured, a layer of epidermis is formed on the surface of the cutis: if the bleb burst, however, the exposed cutis discharges for a time, but by and by crusts, and beneath this the epidermis grows. The disease is often associated with a syphilitic taint.

Varieties—(1) *Pemphigus acutus* is rare; its entire duration is comprised within four weeks.

(2) *Pemphigus infantilis* is met with in newly-born children. Large bullae form behind the ears, on the neck, genitals, and buttocks, and the child succumbs after a comparatively short illness. If it appear on the *palms* and *soles*, it is probably syphilitic in origin.

Treatment.

Constitutional.

If Arsenic fail, try—

℞ (1) Tr. ferri. perchlor.
(2) Quinine sulph.
(3) Tr. gnaiacum.

Pemphigus foliaceous.

No known drug has had any effect on it.

Opium for sleeplessness provided there is no albuminuria.

Local.

In *Pemphigus foliaceous*—

Local sedatives, *e.g.*—

℞ Ung. zinci oxidi ; or,
℞ Pulv. zinci oxidi ; or,
℞ Pulv. zinci oxidi.
Pulv. cretæ, aā partes æq.

Sig. Suspend in water and apply freely with a soft brush.

Continuous weak alkaline baths may be tried.

1. Antisyphilitics.
2. Generous diet.
3. Good wine.
4. Change of air if possible.

Ecthyma—

1. Cleanliness.
2. Poppy head fomentations.
3. Get rid of crusts and apply locally
℞ Ung. hydrarg. on strips of lint.

(3) *Pemphigus vulgaris*, or *chronica*, occurs in a series of successive acute attacks, which are long continued, exhaust the patient, and ultimately cause death. *The commonest form.*

(4) *Pemphigus pruriginosus* is the name used when the skin has been much torn by scratching.

(5) *Pemphigus solitarius* is characterized by the appearance of only one single bleb at a time.

(6) *Pemphigus foliaceous* of *Alibert* is the most important variety. It is one of the *three universal skin diseases* (page 3) and generally begins on the chest. The vesicles are red or yellow in colour, flaccid, spread quickly, rupture readily, and form *thin, yellow, parchment-like* scales. The discharge rapidly weakens the patient, and the extent of the disease interferes with the function of the skin. Great irritation is present, and the affected person is *apt to suffer from diarrhœa.* Sleep is banished; little spurts of fever may occur which precede a fresh outburst of the eruption. In the later stages the skin is raw, irritable, and weeping, and adheres to the bedclothes.

PUSTULAR INFLAMMATIONS.

1. Impetigo is characterized by the formation of discreet pustules seated on a red base; few in number, and occurring on the limbs and face. They are mostly found in ill-clad and ill-fed children, and are most numerous about the forehead, scalp, and back of neck. *Impetigo menti* is *Eczema pilare faciei. M'Call Anderson* now regards Impetigo and Eczema as practically the same.

2. Ecthyma is characterized by the formation of *large* pustules, which are seated on elevated, reddened, and somewhat indurated bases. They are larger than those that occur in Impetigo, and are succeeded by crusts which are of a dark colour; these on removal reveal pink scars, the colour of which afterwards slowly fades. Ecthyma is associated with bad food, bad health, and bad hygiene, and occurs chiefly on the neck and shoulders, but also on the buttocks and extremities. It bears a general resemblance to a boil, but differs from it in *having crusts* but no core in being *superficial* while a boil is deep-seated.

3. Furunculus or Boil in an intense localized inflammation in-

Treatment.

Constitutional.

1. Simple but nourishing food.
2. Wine.
3. *As. Fe.*; *Quin. Sulph.*
4. Regulation of bowels and skin.
5. Change of air.

℞ Liq. potas., ℥ij
Decoct. cinchonæ, ad. ℥vj
℔
Sig. ℥i in aq. ter. in die.

Local.

Furunculus—

1. Endeavour to "abort" the boil, by touching it with
   (*a*) ℞ Ac. carbolici.
   Glycerini āā partes æq.
   (*b*) ℞ Liq. hydrarg nitrat. acid.
   (*c*) Liniment iodi.
   (*d*) *Hebra* recommends the use of ice-cold compresses.
2. If fail, hasten suppuration by hot fomentations or poultices. First protect surrounding tissues, however, or more boils will form there.
3. If advanced, open by crucial incision, and dress antiseptically.

Of the highest importance:

1. Generous diet.
2. Good nursing.
3. Treat original cause, or concurrent ailments, as gout, syphilis, diabetes, as for these disorders.
4. Alcohol; but give it intelligently.
5. Avoid opium in insomnia, especially if albuminuria or hæmaturia be present.
6. *Quinine.*

Carbuncle—

As in Furunculus; but be careful to avoid excessive poulticing, whereby the tissues are rendered sodden, and afterwards heal slowly.

volving the entire thickness of the skin (including the subcutaneous connective tissue) attended by suppuration and the formation of a central core or slough. It commences as a small red papule, which is very hard, and gradually increases in size, till in about ten days it forms a great porky mass. The apex becomes yellow from the formation of pus; this presently ruptures; the *core*, which consists of slough of a "wash-leathery" appearance, is discharged, and the wound heals by granulation, leaving a scar. This latter occurrence shows that the true skin has been involved.

The *pain* in *Furunculus* is great, especially if the lesion be situated near nerves, or where the skin is not freely moveable over the subjacent structures; it increases with the progress of the condition until suppuration ensues. Boils occur most often in young people; come out in successive crops, and are usually to be found on the temple, neck, arms, legs, or buttocks.

The *cause* is obscure. They occur in people *above* and *below* the ordinary standard of health, *i.e.*, in those *overfed* and *underfed;* in *Diabetes mellitus*, in pathologists and dissectors. As a rule they commence near a hair-follicle or sebaceous gland, and some at least may be due originally to irritation set up by retained secretions.

A boil which resolves without proceeding to suppuration is popularly known as a "blind boil."

4. Anthrax or Carbuncle (Anthrax signifies "a burning coal") is merely an advanced condition of *Furunculus*. The differences are—

A *Boil* is small, conical, and opens by a single orifice.

A *Carbuncle* is large, flat, and opens by numerous orifices. It has also in connection with it a good deal of superficial gangrene.

A carbuncle is usually situated on the *face*, nape of neck, or buttock, or between or on the shoulders. Its colour is at first red, but as the disease progresses it becomes of a *dusky* or *livid* hue. It is indurated and dense to the touch at the first examination, from the deep implication of the connective tissue, but becomes boggy at its apex, and develops into a quasi-abscess within a fortnight. By this time the skin over it is *thin* and *cribriform*, and from it a dirty, bloody, foul-smelling discharge oozes. The pain which accompanies it is intense,—of a burning, boring nature like that of a live coal—and keeps the patient from sleep. Its development is attended by acute constitutional disturbances.

Treatment.

Psoriasis—

It may safely be accepted as axioms—

Constitutional.

That the *internal* administration of arsenic will of itself be sufficient to cure Psoriasis.

(1) Treat gout, rheumatism, or syphilis, if present.

(2) A plain diet; no alcohol.

(3) Fresh air, exercise, bathing.

(4) *Arsenic.*

But it must be pushed till its physiological effects begin to show themselves. These are—

(*a*) Puffy swelling of the eyelids.
(*b*) Conjunctival injection.
(*c*) Thirst.
(*d*) Headache.
(*e*) Disturbed sleep.
(*f*) Salivation.
(*g*) Albuminuria.
(*h*) Diarrhœa, Gastro-enteritis.

(1) When the first of these symptoms appear, the medicine should be—

Stopped for a couple of days, and then resumed in slightly smaller doses.

(2) It should be given *freely diluted.*

(3) It should be given with food or immediately after a meal.

Local.

That the *external* application of some preparation of *tar* will hasten the rapidity of the cure.

(1) Soak in hot water, and wash with soft soap first, then dry well, and apply any of the following:—

(*a*) ℞ Ung. picis. liquid.

(*b*) ℞ Liq. carbonis. deterg., ℥ij
Lanolini, ad ℥ij

(*c*) ℞ Ol. cadini.
Sap. mollis.,
Spir. vin. rect., āā ℥ij
Camphoræ, ℥ij
℥ p.p.a.
Sig. Rub in night and morning.

(*d*) Picis liquid.
Glycerini., āā ℥i
Ung. bism. oleat., ℥ij
℥
Sig. Apply night and morning.

Irritation of the general nervous system, pyrexia, muscular prostration, loss of appetite, febrile urine, and slight delirium may be followed by the appearance of the so-called "typhoid" symptoms, and perhaps death within ten days of the onset.

Carbuncle is apt to occur in oldish tipplers; in them the prognosis is bad. In young men of fairly good constitution the prognosis, on the other hand, is rather favourable.

It should be noted that if there be much gangrene connected with the lesion, absorption of the poisonous products will be followed by septicæmia and rapid death.

N.B.—There is another but totally different disease commonly known as *Anthrax*, but also called *Charbon* or *Pustula maligna* or *Splenic fever*. This is a constitutional disease, due to the presence of a bacillus in the blood (the *Bacillus anthracis*), and is further referred to on page 101.

SQUAMOUS INFLAMMATIONS.

1. Psoriasis—the *Lepra* of England—is a scaly disease, produced by a chronic inflammation of the superficial layers of the skin, especially of the rete mucosum. It commences as an eruption of small red spots, over the surface of which the cuticle quickly becomes scaly. This forms *Psoriasis punctata*. These spots spread at their edges until they form patches which vary in size and shape. If circular, and in general appearance somewhat like drops of dry mortar, it is *Psoriasis guttata*. If more like coins in shape and size, it is *Psoriasis nummulata*. When segments of circles coalesce with similar segments, it forms *Psoriasis gyrata*. When in irregular patches, and covering a large area, it is *Psoriasis diffusa*. When it persists for many years it is *Psoriasis inveterata*. When the scaly surface assumes a limpet-like shape, it forms the *Psoriasis rupioides* of M'Call Anderson.

The eruption in Psoriasis is a *dry* eruption; dry throughout; it never vesiculates, nor pustulates, nor leats. It is commonest on the elbows and knees; next commonest on scalp; then on buttocks; *rare* on the face. It is usually dusky-red in colour, and is most apt to appear in spring and autumn. It may be met with at any time after childhood, but is most frequent in

Treatment.

Constitutional.

℞ Liq. arsenicalis, ℥i
Ammon. carb., ℥ij
Potas. acetat, ℥iv
Syr. simplicis. ℥iv
Aq., ad. ℥vi

Sig. ℥ssin aq. ter in die post cibos.

Iron sometimes is beneficial.

℞ Liq. arsen. hydrochlor., ℥i
Liq. ferri. perchlor. ℥ij
Glycerini, ℥iij
Syr. aurantii., ℥iv
Infus. calumbæ, ad ℥vi
m

Sig. ℥ss in aq. ter in die post cibos.

Local.

Psoriasis—

Milton very strongly recommends the vapour bath. "The power of the vapour bath to quell this affection in its most severe forms, and even when it has lasted almost a lifetime is as well ascertained—I do not say known—as any fact in medicine. It produces at first much irritation of the skin, leading to scratching; but this only shows that the bath is effecting precisely what was aimed at. It has set up a healthy and vigorous reaction of the skin which, under its influence, is throwing off the torpor of years."

He advises it to be used thrice weekly.

In *Pityriasis simplex—*

Tonics.

℞ Liq. arsenicalis., ℥i
Syr. zingibr., ℥iv
Aq. dest., ad. ℥vj
m

Sig. ℥ss in aquam plenam ter in die post cibos.

Pityriasis simplex—

Any soothing ointment whose basis is lanoline will do very well.

Pityriasis rubra—

M'Call Anderson strongly recommends three vapour baths weekly, followed by

℞ Ung. bism. oleat. ℥iv

Applied on the still moist skin.

young adults, say between 14 and 21 years of age. Its usual situation is on the *extensor* surfaces. It is essentially a chronic disease, very apt to recur, but not contagious. It is, however, often seen in succeeding generations of those affected by it, and in such instances, though banished for a time, it reappears when the system is impoverished as from nursing, improper diet, &c. On the other hand, it is often found in people in absolutely *rude* health, and also in those subject to gout or rheumatism. If it occur on the soles of the feet, suspect syphilis.

Cause—Hyperæmia of the papillary blood vessels, which produces an abundant new formation of epidermic cells; this goes on so quickly that the cells have no time to become horny before they reach the surface. Hence the scales are really those of the rete mucosum, and, being soft, generally adhere together. For this reason too, as they dry, they shrink more than the horny cells, and finely-divided air getting between them, they present to the observer the peculiar silvery appearance so characteristic of the disease. When the scales are removed, the papillary layer is at once seen; this is of a bright red colour, and bleeds readily.

There are three diseases to which the name *Pityriasis* is applied. They are all scaly in character; but the third, being due to the presence of a fungus, will be found grouped among the vegetable parasites.

1. *Pityriasis simplex* or *capitis* (the "Dandriff" of Bristowe), consists in the production of varying quantities of fine "branny" scales. These are due to a superficial inflammation of the skin, usually on the scalp. Also spoken of as *Furfura*, or "Scurf."

2. *Pityriasis rubra*. In this disease the whole surface of the body is of a vivid red colour, and covered with thin scales which abundantly desquamate, and rapidly re-form. Dry, except when scratched, when it may leat a little. There is no tingling nor itching; the skin feels "tight," but is not thickened. The nails are often involved. It is very chronic, and relapses are common, each of which is accompanied by pyrexia.

Cause—Coats thinks it depends on a lesion of the trophic centres for the skin.

3. *Pityriasis versicolor* or *Chloasma* should really be called *Tinea versicolor*, and under that name it will be found described.

Treatment.

Constitutional.

If you believe in the trophoneurotic theory you may try nervetonics, as

℞ Sol. Fowleri, ʒi
Syr. zingib., ʒvi
Aq., ad. ʒvi
m
Sig. ʒss. ter in die post cibos, or

You may give arsenic in combination with strychnine, in small doses, gradually increased.

Local.

Alopecia prematura—

Very unsatisfactory; the professed remedies are legion. Of course if favus or other evident disease be present the indication is to treat it, and then attack the Alopecia afterwards. Mercurials and iodide of potas. do well internally if there be syphilis as a cause, and locally ung. hydrarg. oleat. (ic) or ung. hyd. ammoniat., or a solution of hydrarg. perchlor., gr. ij, ad. ʒi, do well.

The continuous current of the electric battery for a quarter of an hour daily may be tried in *Alopecia areata.*

ALOPECIA or BALDNESS is a disease familiar as a common senile change, but it may occur independently of old age, and be present even in infancy.

Alopecia senilis is commoner in men than in women, and is always preceded by Canities. It usually begins upon the forehead, and thence extends backward over the vertex, leaving the temples, sides of the head, and occiput still covered with hair. The bare part of the scalp seems smooth, thinner than usual, and of a shining appearance; at first it may be covered with a crop of silky downy hairs. In a microscopic section of such a scalp the skin is seen to be thin, its fat cells diminished in number and shrivelled up, its sebaceous glands few, or even entirely absent, and its hair-follicles and root-sheaths atrophied. There is, therefore, a falling out of the hair, and a non-formation of new hair to replace it. It cannot be cured.

Alopecia prematura is baldness occurring in early life. It may be a symptom or result of some organic disease of the scalp or hair, as eczema, favus, psoriasis; it may be due to some general constitutional affection, as syphilis or an acute exanthem; or it may occur independently of any perceptible disease either local or constitutional, and to this variety belong those instances of premature baldness whose cure is most tedious and difficult. In the two former varieties the local or general mischief which manifests itself upon the skin spreads to the hair-follicles, and is followed by atrophy and death of the hair. If the cause can be discovered in time, and effectively removed, a cure of the alopecia may be expected to follow in due course. In the third variety, however, no apparent cause for the premature baldness can be discovered, and observers are in doubt whether to believe with Kaposi and his school that it is due to a tropho-neurosis of the scalp, or to hold with Hilton Fagge and his supporters that its explanation is yet to be made known.

Alopecia furfuracea is a form which calls for some notice. It occurs in persons who from any cause have become anæmic, and is often associated with dyspepsia and imperfect circulation. It begins as a *Pityriasis capitis* or *Seborrhœa sicca*, the surface of the scalp being covered with numerous glistening scales. These may either adhere firmly to the scalp and hairs, or when friction is

Treatment.

Constitutional.

The administration of iron in anæmics, good feeding, and improvement generally of the surroundings are valuable aids to local treatment.

Local.

Cantharides is the most common ingredient of lotions and hair-washes, but its utility is more than doubtful, and it sometimes, even when applied to a comparatively distant surface like the scalp, produces strangury. Capsicum, ammonia, croton oil, blistering fluid, liq. potassæ, in fact every remedy that could be supposed to stimulate the scalp has been used at one time or another. One authority is all for alcohol and ether, and these would seem to be useful in cases of seborrhœa by dissolving the oil; another maintains that all alcohols are ruinous to the scalp, and that nothing should be used except the essential oils of plants. The oleates are supposed to find the most ready access to the hair-follicles, and astringents and tonics, such as tannic acid and sulphate of quinine, may be given as oleates with this object. *Alopecia furfuracea* would seem to be curable if dealt with early enough, but *Alopecia areata*, especially if hereditary, can only be so to a very minor degree.

applied to the surface come off in clouds or showers. Slight itching may accompany their formation. Sooner or later the hair begins to come out, and the condition may go on to more or less complete baldness if not treated in time.

Alopecia areata is another form of premature baldness, and is of all kinds the one most difficult to cure. It begins by the formation of one or more circular bald patches, which are unnaturally white in colour, spread at their periphery, and may extend to other parts of the body. In rare cases the eyebrows, eyelashes, moustache, and beard, as well as the pubic and axillary hairs, all disappear, and the resulting disfigurement is very striking. Permanent baldness is apt to ensue, the affected surfaces becoming smooth and shining. It is often hereditary, and may be unaccompanied by any other signs of ill health, though it may be noted that those who suffer from it are usually very sensitive with regard to the change in their appearance.

PIGMENTAL AFFECTIONS OF THE SKIN.

1. LEUCODERMIA is an affection of the skin in which white patches with sharply-defined edges are set in skin of a darker colour than usual. *It is due to a loss of pigment*, but except in this respect the structure of the skin is quite normal. Treatment of the white patches by tattooing and blistering has been attempted, but with very questionable success.

2. MELANO-DERMIA.—This darkening of the skin is due to an increase in the amount of its normal pigment. Any irritant applied to the skin for a sufficiently long period will produce an hyperæmia, and this, if kept up, will end in increasing the amount of pigment at that particular spot. Exposure of the face to the rays of the sun in summer time, or to cold wind in cold weather will cause it. So also will toasting the shins in front of the fire in elderly people and those whose circulation is poor. It may be due to irritation in long-standing prurigo, pruritus, or scabies; and it is curious that it seems much more rapidly produced in old age than in youth. The pigmentation around the cicatrices of old varicose ulcers is well known; and the raw ham like or coppery maculæ associated with syphilis

TREATMENT.

Constitutional.	*Local.*
	Bromidrosis—
	Sponge surface frequently with
Belladonna internally.	(1) Solution of salicylic acid, 10 per cent.
	(2) Saturated solution of boracic acid.
	Apply glycerine and extract of belladonna—equal parts.
	Frequent change of linen.
	Flannel should be worn next skin.

when it attaeks the skin must also be familiar to the student. To the latter condition M'Call Anderson has applied the term *Melanopathia syphilitica.*

3. Xanthelasma or Vitiligoidea is a name applied to the oeeurrenee of yellowish patehes, whieh have well-defined margins, and at first appear raised, but whieh are really flat and level with the surrounding surfaee. They appear first near the inner canthus of the eye, and spread thence till they form eireles of varying breadth around each orbit. They also appear elsewhere upon the body, partieularly upon the baek of eaeh hand and upon the palms and soles; nay, they may be met with even on the mueous membrane of gums and palate. In rare eases they are assoeiated with the formation of painful nodules on the extensor surfaees of the limbs, and to this condition the name *Xanthelasma tuberosa* is applied.

Xanthelasma oeeurs most commonly in women beyond the prime of life, and is not seldom assoeiated with long-standing cases of *jaundice* from whatever eause arising.

4. Canities is general blanching of the hair, and is eommon as a senile ehange. Like Alopeeia, however, it may be premature. It may oeeur with startling rapidity; and the white or steel-grey appearanee it presents is due to the presenee of air-bubbles in the shafts of the hair, whereby the refraetive power of eaeh is inereased.

DISEASES OF THE SWEAT GLANDS.

1. Anidrosis is absenee of perspiration. It oeeurs eommonly where there is much pyrexia, but it is also found in diseases such as Ichthyosis and Pityriasis rubra, in whieh the temperature is normal.

2. Bromidrosis and Osmidrosis are names given to a eondition in whieh the perspiration has an unusually pungent and offensive odour. The feet and axillæ are the eommon sites of the affeetion, whieh oeeurs oftenest in young adults, particularly women. The disgusting odour is due to the deeomposition of butyrie, eaproic, and eaprylie aeids.

3. Chromidrosis refers to the seeretion of *coloured* sweat.

TREATMENT.

Constitutional.	*Local.*
	Hyperidrosis— Practically similar to that of *Bromidrosis.*
Tonics.	Cold bathing.
	Comedo— Express with Bulkley's silver tube and apply:
Tonics.	(1) Lotio. hydrarg. perchlor., gr. ij. ad. ℥i (2) Liq. plumbi. subacetat. dil.

There are rare cases in which the sweat is actually coloured blue, and this is said to be due to the presence of indican in the sweat, which turns to indigo blue on exposure to the air.

A variety of this is *Hæmidrosis* (or *Hæmatidrosis*), concerning which there is some conflict of opinion. Some think it due to actual hæmorrhage into the sweat ducts; but this symptom is absent in Purpura and other diseases in which one would expect it to occur. Babes says that it is due to a mould-fungus, which he calls the *Micrococcus hæmatoides* (see *Parasitic Diseases*, page 57). In any event, the condition is an extremely rare one.

4. Hyperidrosis is an excessive secretion of perspiration, commonly local, and apt to be followed by Erythema intertrigo or Eczema intertrigo. In health it is sufficiently familiar as being produced by active exercise; and in disease the sweating stage of ague and the night sweats of phthisis are characterised by the occurrence of drenching perspiration.

Locally, *Hyperidrosis* is annoying to the patient and troublesome to treat; the hands and feet are usually affected, and the surfaces become tender and even painful.

Along with *Hyperidrosis*, especially in the course of acute rheumatism, and enteric and other fevers, minute transparent vesicles are found in great numbers on the surface of the skin. These are—

5. Sudamina, and have already been referred to (page 4). They look like little drops of water, and are due to minute collections of sweat between the layers of the epidermis. They are often extremely itchy.

6. Miliaria.—Minute inflammatory pimples occurring in the same situation and under the same circumstances are *Miliaria* (see *Lichen tropicus*, page 19).

7. In Comedo the sebaceous follicle is plugged with secretion, whose surface-end has a black or dark-blue colour. This may simply be due to dirt, but Unna of Hamburg maintains that it is due to a true pigment allied to ultramarine, and which is destroyed by the action of aqua-regia. The plug consists of sebum and epidermis, and sometimes contains the *Acarus folliculorum* (see *Animal Parasites*, page 63).

8. Seborrhœa is an excessive secretion of sebum, which accu-

Treatment.

Constitutional.

Local.

Seborrhœa—

Cleanliness: the free use of good soap and hot water.

The application of mild astringents.

Milia and *wens* should be excised.

Acne—

℞ Sol. Fowleri, ℥i
Vin. ferri, ad. ℥vi

Sig. ℥ss.

℞ Pil. calc. sulphidi, gr. ¼
(Schiefflin.)

Avoid alcohol and stimulating foods.

(1) Removal of contents of follicles.

(2) Systematic use of *hot* water in washing.

(3) Application of Ung. hyd. ammon.

Or (4) ℞ Hydrarg. perchlor., gr. ss.
Tk. benzoini co., ℥ss
Mist. amygdalæ, ℥i

If there be much erythema use sedatives locally, and avoid friction.

mulates on the surface, usually of the scalp, in adherent scales. These scales have often a greenish, greasy look, and give an *oily* sensation when felt between the fingers. (Be careful to inquire if there has been any recent application of oil to the scalp.) It is commonest in young people, and the danger is that it will involve the hair-bulb and produce permanent baldness.

Two varieties are described:

(a) *Seborrhœa sicca*, in which the scales are dry.

(b) *Seborrhœa fluida* or *oleosa*, in which the scales are moist.

An exaggerated degree of this latter condition is very often present in newly-born infants, when it forms the *Vernix caseosa*, with which they are coated when ushered into the world.

9. ACNE is an inflammation of the *sebaceous glands*, due to the retention of sebum.

Simple retention of sebum with patency of the orifice and absence of inflammation constitutes *Comedo*, as we have just seen.

Closure of the orifice and accumulation of the secretion to form a round, solid globe beneath the unbroken skin, forms the *Milium*, or *Strophulus albidus* of Willan.

Softness, elasticity, and considerable increase in the size of the retention cyst of sebum constitutes the *Wen* or *Sebaceous tumour*.

Retention of the sebum alone, then, is not sufficient to constitute acne; *there must be irritation and subsequent inflammation* as well.

Acne occurs most commonly *between puberty and twenty-five years* of age, and is frequent in fair-haired people and those who suffer from dyspepsia. Increased action of the skin at and after puberty is supposed to have to do with it, and menstrual derangements also constitute a cause. Eruptions like it are produced by a long-continued course of some drugs, such as potas. bromid. and potas. iodid.

Course of acne.

A papule appears which is dark red in colour, with an areola the base of which extends as the papule matures; the centre of the papule becomes pustular, but does not rupture readily. The lesions, at first papular and then pustular, may become even nodular in character; they may vary in size from a pinhead to a bean. The papules may be deep-seated, or situated on the surface,

Treatment.

Constitutional.

Direct your attention to condition of stomach and menstrual function.

Nourishing but non-stimulating diet; avoidance of alcohol.

Tonics.

℞ Liq. strychninæ hydrochlor.
Liq. arsenicalis, āā ℥i
Syr. zingibr., ℥i
Aq., ad. ℥vi
Sig. ℥ss.

Local.

Rosacea—

In first stage—

Destroy the meandering vessels by

(1) Electro-puncture.

(2) The knife, and cauterize by touching the ends of the vessels with liq. ferri. perchlor.

In second stage—

(1) *Continuous* application of cold.

(2) Painting surface with flexible collodion.

(3) Astringents.

In third stage—

Friction night and morning with a flannel cloth, and

℞ Sulph. precip.
Glycerini.
Adeps prep., āā ℥i
Lanolini, ℥i

In fourth stage—

Removal of the hypertrophied masses by the knife.

are usually chronic, and when pressed out or opened leave the affected surface for a time pitted as if by smallpox. The hyperæmia connected with the formation of these papules often leads to a permanent thickening of the connective tissue involved.

Acne occurs chiefly on the face and upper half of the chest.

(1) *Acne punctata* or *papulosa* is a mild form in which the apex of each papule is marked with a black point.

(2) *Acne indurata* is when the inflammation is sub-acute, the follicle hardened, and suppuration *slow* and *deep*.

(3) *Acne vulgaris* or *pustulosa* is *Acne punctata*, plus superficial inflammation ending in the production of abscesses.

10. Rosacea (or *Acne rosacea*) is a disease which resembles acne in some points but differs in other points. It usually occurs in people above forty years of age, and is often associated with indulgence in stimulating foods and abuse of alcohol. Like acne it may be caused by dyspepsia and derangement of the menstrual function. It consists of the appearance of an area of inflammatory redness, often dark in colour, which begins on the nose and spreads thence to the cheeks. The capillaries become permanently dilated, and the increased vascularity leads to a growth of new connective tissue. The nose assumes a "craggy" form, is dark purple in colour, and is studded over with nodules or pustules, giving rise to the term "grog-blossomed." It passes progressively through the following stages:—

(1) Enlargement of the capillary blood-vessels.

(2) Transient hyperæmia after exposure to cold, or indulgence in alcohol.

(3) Chronic inflammation of the tissues, with the subsequent production of papules, vesicles, or pustules.

(4) Permanent hypertrophy.

PARASITIC DISEASES OF THE SKIN.

Sundry diseases of the skin can be directly traced to the presence in or on the tissues of micro-organisms belonging to the vegetable kingdom; others are due to the presence of microscopic living members of the animal kingdom. We consider the former first.

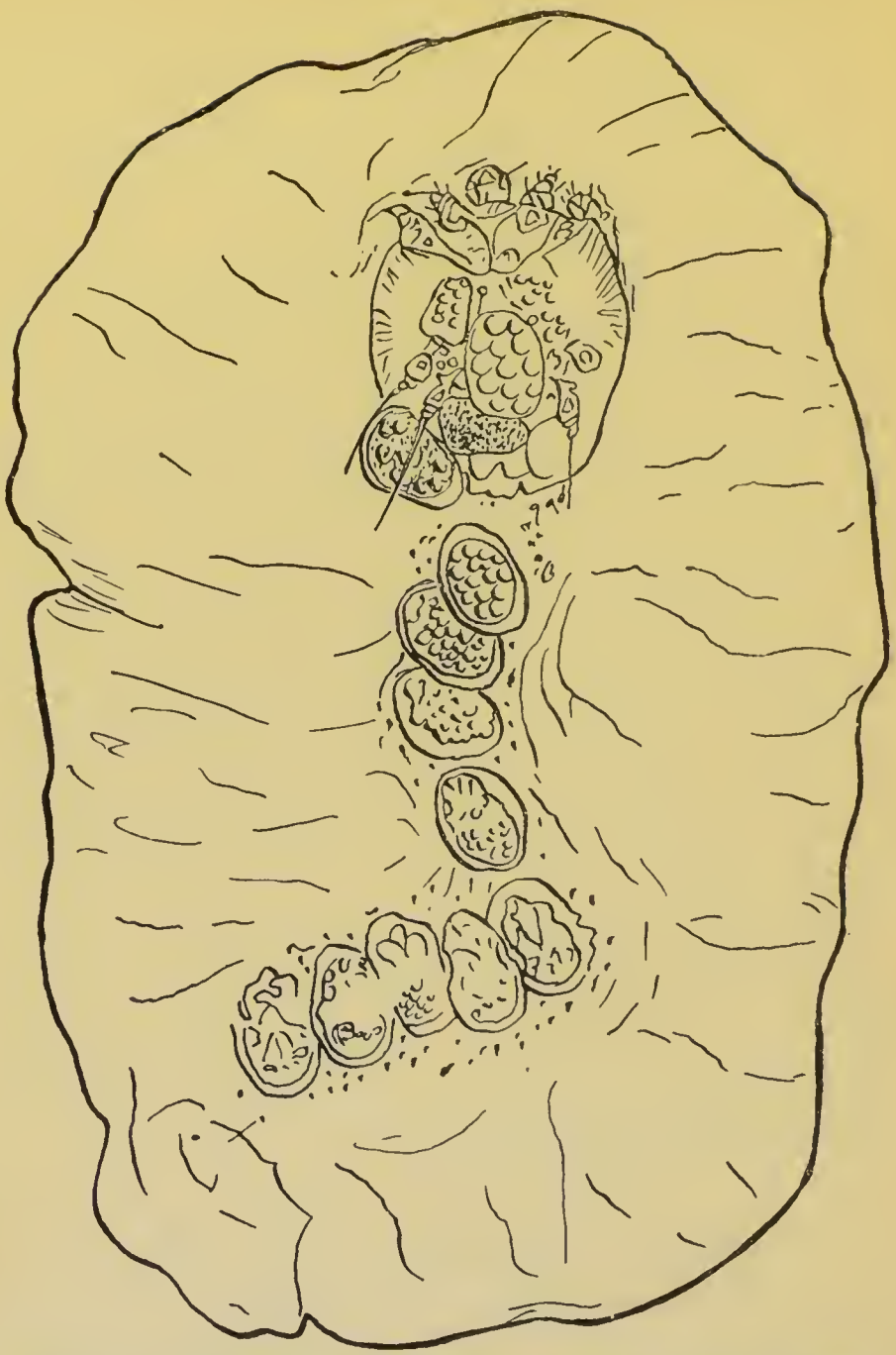

Fig. 1.—A burrow in the epidermis formed by a female Acarus scabiei. The parent is situated at the upper extremity, and behind her are a series of ova, of which the lowermost are the most mature. (After *Elfinger* in *Hebra's Atlas.*) × 70.

All the vegetable parasitic diseases are due to *fungi*, of which there are four chief groups—

Fungi.
1. True fungi or mould fungi.
2. Mycetozoa.
3. Yeast fungi.
4. Fission fungi.

1. The *true fungi* or *mould fungi* consist of aggregations of minute cells, each of which is composed of a membrane containing protoplasm. Their growth is by elongation of the cells, and by this means a series of hyphæ or threads are formed. To this group belongs the *Microsporon furfurans*, the *Tricophyton tonsurans*, and the *Achorion Schönleinii*.

2. The *Mycetozoa* include organisms on the border line of the vegetable and animal kingdoms, whose reproductive organs resemble those of the fungi, but who differ from them in other respects. They are not dealt with further here.

3. The *Yeast fungi* consist of cells, *which increase in number by budding*, each parent cell throwing out buds from its wall. These buds gradually assume the size and form of the parent cell, and, finally separating from it, thereafter lead an independent existence. To this group belongs the *Saccharomyces mycoderma*, asserted by Rees and Grawitz to be the same as the *Oidium albicans*, the fungus of *Thrush*.

4. *Fission fungi* or *Bacteria* include a large number of minute, one-celled, globular, or thread-like organisms, which multiply by fission. Their activity both in assimilation and reproduction is so great that they rapidly destroy the tissue they inhabit, and this result is still further increased by the substances they produce during their development.

Varieties are numerous. Some grow as circular or oval cells: these are the *micrococci*. If the cells assume a chain-like arrangement, they are *streptococci*, example *Streptococcus erysipelatosus*. In irregular masses they form *staphylococci*. Fission fungi, which are rod-like in form, and in which the longitudinal diameter is considerably greater than the transverse, are *bacilli*: example, *Bacillus lepræ: Bacillus œdematis maligni*. (A distinction used to be drawn between shorter rods, which were called bacteria, and the longer rods—the bacilli—but this no longer obtains; and

Treatment.

Constitutional.	*Local.*
	Tinea versicolor— *Perfect cleanliness.* Daily washing with (*a*) *soft* soap, (*b*) hot water, (*c*) free use of a flesh brush: after which apply
Tonics, if necessary.	℞ Sod. hyposulphit., ℥iv Glycerini puri, ℥ij Aq., ad ℥iv ft lotio. Sig. use after washing.
	Tinea tricophytina— 1. Epilate or shave the patches if not extensive. 2. Rub the surface with spirit of turpentine. 3. Wash off with soap and hot water, then apply ℞ Ung. hydrarg. oleat., 5 per cent., or ℞ Ung. hydrarg. ammoniat., or ℞ Tinct. iodini., or Paint surface with Smith's blistering fluid, or ℞ Lotio. sod. hyposulph., ℥ij ad. ℥i

the name *Bacteria* may now conveniently be applied to the whole group.) When the bacilli are of a wavy or corkscrew-like form they are called *spirilla*.

1. Tinea.—There are *three true* and *one false* Tineæ.

(a) *Tinea versicolor*, or *Pityriasis versicolor* (which see), or *Chloasma*, is a parasitic disease, due to the presence in the skin of a mould fungus, the *Microsporon furfurans*. By scraping the affected portions of skin, and placing the scales under the microscope with a drop of liquor potassæ, groups of large spores entangled with mycelium threads can easily be seen.

Tinea versicolor is essentially a filth disease, and occurs in people of dirty habits whose health is below the normal standard: *contagious*. It consists in the formation of irregular patches of fawn-coloured scales which are found on the trunk (chiefly on the chest) of *adults*. It never affects exposed parts, and is not to be met with in children.

(b) *Tinea tricophytina* (or *trichophytina*), *Ringworm*, is due to the presence of a mould-fungus, the *Tricophyton* (or *Trichophyton*) *tonsurans* chiefly among the hair, but also sometimes in the epidermis and below the finger-nails. It begins in the form of scaly patches of varying size, which are circular in outline, and which spread at their margins. As the disease advances the skin becomes dry, and the circular form is lost. The margin of the patch is always red and elevated, and as it spreads the disease dies in the centre, which is left discoloured (yellow or brown). The disease is apt to break out here again in isolated spots. When it occurs on the head or beard there is often an abundant white powdery deposit on the hairs; these latter are dull, limp, and stubbly, and easily removed. It is *itchy*, *contagious*, and may be communicated to other animals besides man (horse).

The primary lesion is *vesicular* or *papular*.

The spores of the fungus are *spherical*.

When it occurs on the head it forms *Tinea tonsurans* or *Porrigo scutulata*.

When on the beard it is *Tinea sycosis*.

When on the trunk it is *Tinea circinata*.

The fungus in all the above forms is one and the same, namely, the *Tricophyton tonsurans*.

TREATMENT.

Constitutional.	*Local.*
	Tinea favosa— 1. Epilation. 2. Antiparasiticides, as the ℞ Lot. sod. hyposulph., ʒij ad. ʒi

(c) *Tinea favosa* or *Favus* is a disease due to the presence of a mould-fungus, the *Achorion Schönleinii*. The scalp is the usual seat, but other parts may be attacked. The hair is dry and faded, and has a "mousey" odour. Cup-shaped crusts of a lemon-yellow or sulphury colour are imbedded in the skin of the head, and these contain the parasite. The spores in this instance are *large* and *oval* in shape; the disease commences in circles like *Tinea tricophytina*.

A comparison of the signs and symptoms of *Tinea sycosis* with those of *Eczema pilare faciei*—

Tinea sycosis.	*Eczema pilare faciei.*
History of "foul shave."	No such history.
Short in duration.	Long (probably) in duration.
Hair bleached and broken.	Hair apparently unaffected.
Parasitic dust on hair.	No dust on hair.
Easily epilated.	Painful on epilation.
Skin not infiltrated.	Skin infiltrated.
Circular.	*Not* circular; not in distinct rings.
Lumpy.	Distinct red dots at orifices of hair-follicles.
Parasite under microscope.	No parasite under microscope.

A comparison of the signs of *Tinea favosa* with those of *Eczema capitis*—

Tinea favosa.	*Eczema capitis.*
Lemon-yellow coloured crusts.	Grey-coloured crusts.
Crusts cup-shaped.	Crusts not cup-shaped.
Crusts occur in clusters.	Crusts do not occur in clusters.
No itching.	Is itchy.
Has a "mousey" odour.	No "mousey" odour.
Parasite below microscope.	No parasite below microscope.

The fourth Tinea, the so-called *Tinea decalvans*, is not a Tinea at all, although said to be due to the presence of a vegetable parasite, the *Microsporon audouini*. The existence of this parasite is now regarded as mythical, and the disease is called *Alopecia areata* or *Alopecia circumscripta*. It will be found described under that name.

2. Erysipelas is an acute specific inflammation of the skin, attended with fever and local redness and infiltration; tending to spread: *contagious*. It is due to the presence of micrococci (*Streptococcus erysipelatosus*) in the lymph spaces and vessels of the skin and subcutaneous tissue. Each streptococcus is spherical in shape, and about 1 micro-millimetre in diameter.

Origin.—Erysipelas in origin is either *traumatic* (arising from a wound) or *idiopathic* (occurring as a primary disease.).

Traumatic erysipelas is developed when any wound, or condition equivalent to a wound, exists, as at the navel of the newly-born child.

Idiopathic erysipelas is developed without any breach of continuity of the surface, and is usually due to sudden exposure to cold or other irritant.

Pathology.—Erysipelas begins as an hyperæmia, which increases as the infective organisms propagate along the lymph spaces. Serum and leucocytes are poured out; and in severe cases the latter may be present to so great an extent that the skin is softened and pus accumulates beneath it. The epidermis is raised by the exudation, and so vesicles, pustules, and abscesses are formed; the superficial skin may slough, and detach itself along with the pus. The coats of the veins may be affected by extension of the inflammation to them (*phlebitis*), and this may lead in turn to the formation of blood-clot in the vessels (*thrombosis*).

Erysipelas is apt to extend from the skin to deep-seated organs: in the face, by way of the mucous surfaces of the mouth, nose, or ear, it may produce laryngitis, œdema glottidis, or meningitis; in the trunk it may lead to pleurisy, pericarditis, or peritonitis. Repeated attacks produce permanent thickening of the skin and subjacent connective tissue (see *Elephantiasis*). One attack, so far from conferring immunity, renders the subject of it liable to its recurrence.

The *symptoms* vary with the site, extent, and intensity of the inflammation.

General Symptoms.—The local signs of the disease are generally preceded by rigors, headache, muscular pains, and an increase in the temperature and pulse-rate. (The characteristic local blush now appears, with heat, tingling, tenderness on pressure, and a

swollen and painful condition of the nearest lymphatic glands.) The skin is dry; the tongue is furred; there is thirst, nausea, anorexia, often vomiting; the bowels are constipated, the urine scanty and febrile; the patient is drowsy, but does not sleep much. Indeed, persistent and intractable *insomnia* is a very notable feature in the great majority of cases. If the disease be of only moderate severity, the patient may from this point begin to mend: but in sharp cases the temperature continues to rise (103°-105°), though with well-marked morning remissions; the tongue becomes dry and brown; and there is more or less delirium toward evening. The pulse, at first rapid and bounding, soon fails in strength, and in elderly people and those much given to drinking habits this failure is rapid. These graver symptoms occur from the sixth till the ninth day, as a rule; and if the temperature fall (which it does by *crisis*), the patient may even yet recover. Should the temperature remain highly febrile, however, the so-called "typhoid" symptoms will not be long in developing. The limbs become tremulous, the tongue black and dry; there is retention of urine, or the evacuations are passed in bed. Delirium may be (*a*) acutely maniacal, the patient insisting on getting his clothes to go out with, and offering violence when this is refused; (*b*) busy and talkative (as in delirium tremens); or (*c*) low and muttering, with picking at the bedclothes (as in enteric fever). The urine, when it can be got, is highly albuminous, and with abundant tube-casts and urates, and sometimes even blood, in it. As death approaches the temperature rises still higher; the respirations become quick, shallow, and noisy; the pulse is soft, irregular, and so rapid as to be almost uncountable; the skin is bathed in clammy sweat; the face drawn and pinched, or puffy and bloated-looking; and the condition passes on into one of coma, to end in *death*.

Local Signs.—The skin becomes red, smooth, swollen, *shining*, and painful at one point, whence the disease spreads, often with great rapidity, to other parts. Its line of advance is well-defined by an abrupt red margin; where it is subsiding, the redness gradually shades off into the surrounding healthy skin. It starts usually on the face, especially where skin and mucous membranes meet (as at the angles of the mouth), thence it extends upward over the scalp, obliterating the features by the swelling it produces.

Treatment.

Constitutional.

1. Start by clearing out the bowels by means of a brisk purge.

2. If the pulse be soft and compressible, give whisky, say ℥vi daily, from the outset: later on increasing the daily dose, and changing to brandy if need be. Digitalis may be required.

3. Support the strength by nourishing food, soups, egg-flip, essence of beef.

4. Quench the thirst by acid drinks, as potas. imperialis, and aerated waters.

5. Avoid the traditional treatment by Tinct. ferri. perchlor. in large doses; it is questionable if it does good, and it certainly upsets the stomach.

6. In sleeplessness *avoid opium*; try Hyoseine.

7. It may be necessary, in acute delirium, to use a restraining sheet, and apply ice or evaporating lotions to the scalp.

8. Treat complications as they arise.

Copland quotes a case of apparently impending death, in which the patient was comatose, with a black tongue, and uncountable pulse; three drachms of turpentine was given in castor oil and honey, and the patient recovered.

In convalescence, tonics.

Local.

Erysipelas—

Exclusion from the air is of prime importance. Innumerable contrivances have been devised for this purpose, such as masks of Gamgee, or cotton wool; dusting the face with powders, such as zinc oxide or even flour; painting the surface with collodion, all of which act slowly and unsatisfactorily. Cold moist dressings give greatest relief to the inflamed surface. *Hebra* strongly recommends thin strips of lint wrung out of *cold* water to be applied, and frequently renewed. The writer found this plan work admirably.

Abscesses must be opened and treated on ordinary surgical principles.

The amount of œdema, as of pain, depends on the nature of the cellular tissue affected; if this be dense and unyielding, swelling is slight, but pain is great; if the tissues be lax, as in the eyelids, there is little or no pain, but great disfigurement. In pronounced cases, vesicles, and blebs may form, but as the swelling and redness abate, these burst, scab over, and finally separate.

The inflammation is, as a rule, greatest from the second till the fifth day; if slow in development it may be at its height in one part while subsiding elsewhere. Relapses are common.

When the subcutaneous tissue is deeply involved, and sloughs, the condition is sometimes described as *Phlegmonous Erysipelas*. *Prognosis*, in uncomplicated cases, is favourable; in severe cases, with much pyrexia and prostration, it is very grave.

Complications.—Tonsillitis, laryngitis, œdema glottidis, bronchitis, pneumonia, pleurisy, *nephritis*, meningitis.

3. Hæmidrosis or Hæmatidrosis or Sueur Rouge (red sweat) has been discovered by Babes to be due to a fission fungus, the *Micrococcus hæmatoides*. These micrococci are each one micro-millimetre in length and about half that in breadth, and are united by a gelatinous zoogloea mass of a uniform red colour. These masses surround and adhere to the hairs on those parts of the body where the red sweat is found, as in the axilla.

4. Malignant Œdema is a disease resembling erysipelas, of which, indeed, it was for a long time thought to be an exaggerated variety. It differs from erysipelas in being due to a totally different fission fungus, the *Bacillus œdematis maligni*. Examination of these bacilli show them to be rods, each about 3 micro-millimetres in length and 1 in breadth, and these *sometimes* exhibit motion. The disease is characterized by the production of an emphysematous swelling of the part involved, with the development of a very foul odour; the tissues rapidly become gangrenous, and the disease is always quickly fatal. Rare nowadays, but common before the introduction of antisepsis into surgery. Occurs in deep wounds or compound fractures.

5. Leprosy—*Lepra* of continental literature—(compare with Lepra of England, which is Psoriasis, page 33). *Leontiasis* or *Elephantiasis Græcorum* is a disease due to the presence of the *Bacillus leprœ*, a fission-fungus first described by *Armauer*, *Hansen*, and

Treatment.

Constitutional.	*Local.*
Tonics, and nourishing food if health be broken down.	*Phtheiriasis—* 1. Absolute cleanliness. Frequent change of linen, which should be washed in boiling water, and then subjected to high dry heat (250-280°). Same with bed linen. 2. Shave hairy parts. 3. Rub in : ℞ Ung. staphysag., ℥iv or ℞ Hydrarg. perchlor., gr. xij Aq. ad ℥vi m or ℞ Ung. hydrarg. 4. If on the pubis, the patient should wear a pair of ordinary bathing drawers while under treatment.

Neisser. Each bacillus is from 4 to 6 micro-millimetres in length and less than 1 micro-millimetre in breadth, and bears a close general resemblance to the *Bacillus tuberculosis*. The bacillus lepræ is found to be present in all forms of leprosy, quite independently of the country in which the disease has been acquired. It has never been found in any other affection, and always occurs in this; it has been observed in enormous numbers in the blood of lepers and in almost all the organs of their bodies. The disease is not further described here, as it is found convenient to group it among the hypertrophies and tumours of the skin (refer to page 75).

Several constitutional diseases, due to the presence of micro-parasites in the system, occasionally develop skin lesions of different types. Among these may be mentioned *Anthrax*, *Glanders*, and *Foot-and-mouth disease*. These are described shortly on pages 101 to 103.

ANIMAL PARASITIC DISEASES.

1. Phtheiriasis (*Lousiness*).

Three kinds of lice infest man.

(1) *Pediculus capitis*.

(2) *Pediculus corporis* or *vestimenti*.

(3) *Pediculus pubis* or *inguinalis*.

P. capitis inhabits the hair of the head only.

P. corporis is found among the folds of the underclothing, and feeds on the epithelial débris of the skin.

Pediculus pubis may be found on all hairy parts except the head.

1. *Pediculus capitis* (Fig. 2) is grey in colour, and feeds on the scurf and hairs. The female is largest. The "nits" are attached to the hairs, like the cocoons of moths to stalks of grass, and are furnished with lids. The presence of pediculi causes scratching, and eczema may be produced by this cause.

(*Pediculus tabescentium*—*Death louse*—"*Pou des malades*.")—These are head lice which multiply rapidly toward the termination of long and wasting diseases.

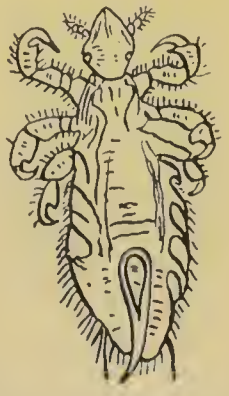

Fig. 2.—Pediculus capitis (male). (After *Küchenmeister*.)

Treatment.

Constitutional.

Bring up the general health, especially in the pustular forms.

Local.

Acarus scabiei—

1. Slit up the burrow by means of a sharp needle, and extract the insect; or

2. Excise the parasite, burrow and all, by means of a sharp pair of scissors curved on the flat; or

3. Soften the skin by warm bathing, then rub in:

(*a*) ℞ Sulph. precip., ℥ij
Potas bicarb., ℥i
Lanolini, ad ℥xij

It may happen that the sulphur ointment sets up an acute dermatitis from its own irritating action; provided you are sure that the parasite has been killed the local application of Ung. zinci oxidi is then all that is necessary.

2. *Pediculus corporis* (Fig. 3), or *vestimenti*, is larger than Pediculus capitis, and lives in the folds of the clothing, where it deposits its eggs, which often resemble in colour the clothing in which they are placed. By irritation and the subsequent scratching it produces secondarily pruriginoid and papular eruptions. It occurs commonly in the old, and is often the true cause of the so-called *Pruritus senilis*.

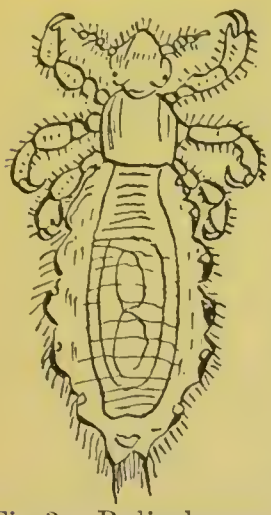

Fig. 3.—Pediculus corporis (female). (After *Küchenmeister*.)

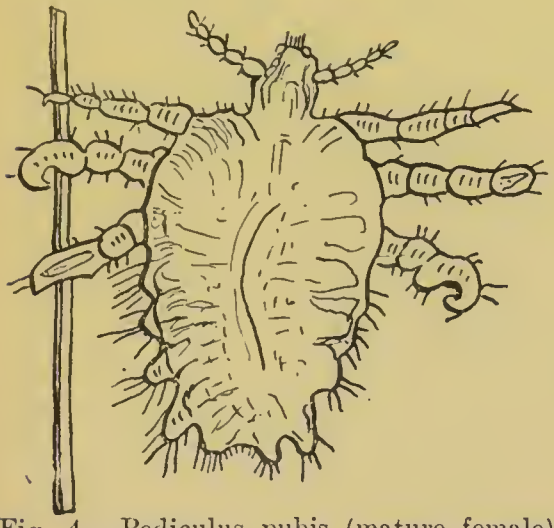

Fig. 4.—Pediculus pubis (mature female) grasping a hair × 30. (After *Dr. C. Fred. Pollock*.)

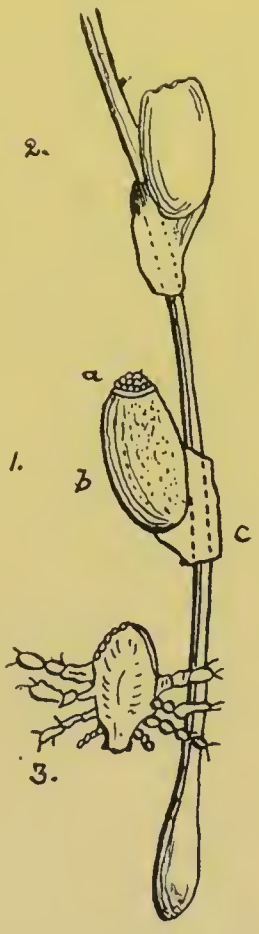

Fig. 5.—*3*, Young Pediculus pubis grasping a hair; *2*, Empty nit; *1*, Nit with (*a*) lid; (*b*) granular contents; (*c*) attachment to hair. (After *Dr. C. Fred. Pollock*.)

3. *Pediculus pubis* or *inguinalis* (Crab louse) (Fig. 4 and 5) is broader than the other two, and has larger claws, which are hooked. It nestles closely into the skin, which it bites deeply. It fixes its "nits" close to the point where the hair emerges from the

Treatment.

Constitutional.

Local.

Purification of the clothing and bed-clothing by exposure to high dry heat is absolutely necessary.

Acarus folliculorum—

For treatment see *Acne* and *Rosacea* (pp. 44-46).

hair-follicle. It causes *violent* irritation and often scabbing, and it is difficult to get rid of.

There are *two* acari.

(a) *Acarus scabiei* or *Sarcoptes hominis* (Figs. 6 and 7) is the itch insect, and causes the disease called *Itch*. The female insect penetrates the epidermis, forming a little cuniculus or burrow, at the inner end of which she resides and lays her eggs (Fig. 1). Here she dies.

The young acari are hatched, and great irritation is set up, together with intense itching, which is worse at night when the host is warm in bed. There is always a history of infection. The primary lesion is a *papule*, produced by the opening up of the epidermis and swelling of the papillary layer, which is infiltrated with serous fluid and round cells. Vesicles and pustules are produced when the irritation is great. Favourite situations are: Flexor surfaces of the limbs; wrists, palms, soles; between fingers, between toes, pudenda, and buttocks. Both adult insects have four pairs of legs, the young acari have only three pairs. Both male and female have suckers on the two anterior pairs of legs. The male insect does not burrow, is smaller than the female, and is further distinguished by having terminal suckers on the hindmost pair of legs. Discovery of the insect by microscopic examination settles the diagnosis.

(b) *Acarus* (or *Demodex*) *folliculorum* (Fig. 8) is an animal parasite which resides in the sebaceous follicles, just where they open into the hair follicles. It is described as being of sluggish habits, and as lying imbedded in the sebum, with its head pointed downwards. Numbers of them exist in cases of *Acne punctata*, but produce no constitutional effect in man, though they are said to be fatal to the dog. From 1 to 13 in number have been found in a single follicle. The young have three pairs of legs, the adults four. To find the acari dilute the expressed sebum with olive oil, and examine microscopically.

It may seem trivial to note the eruptions produced upon the skin by the common flea (*Pulex irritans*) and the common bed-bug (*Cimex lectularius*), but that due to the former, at least, acquires importance by being frequently mistaken for the eruption of *typhus* fever. This is the more likely if the

flea-bite be found upon the back of both hands and feet, or between the shoulder-blades, situations usually early affected by the eruption of typhus. Both *purpura* and *scurvy* in their early stages present appearances, so far as the skin is concerned, which might be diagnosed as due to flea-bites.

An *ordinary flea-bite* is simply a localized extravasation of blood into the superficial layers of the skin due to the bite of the insect.

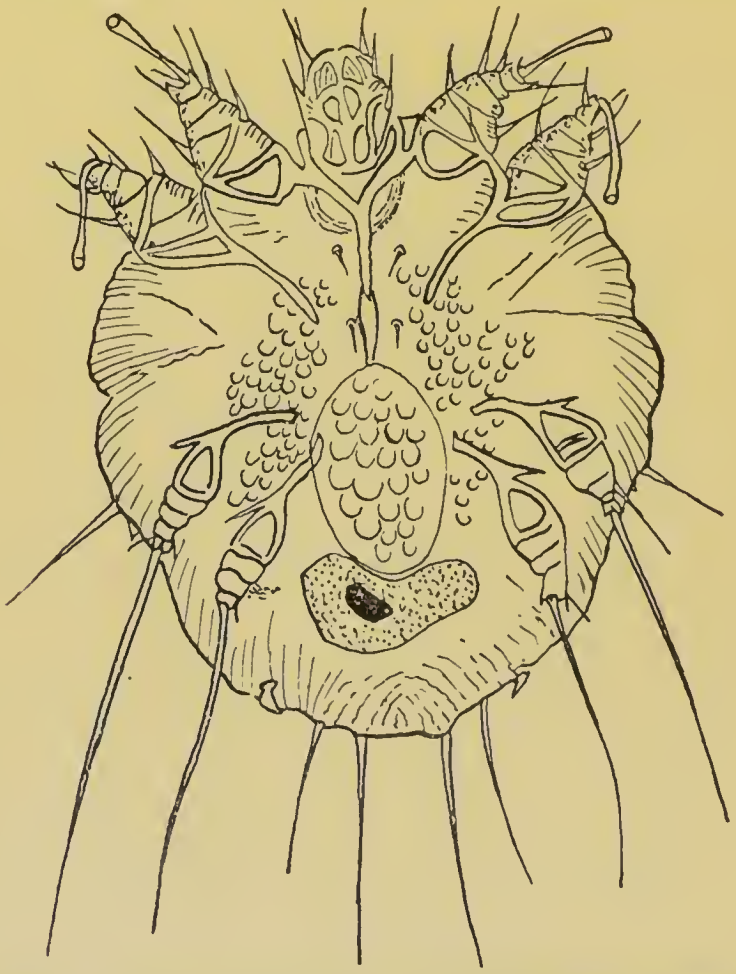

Fig. 6.—Acarus scabiei (female, pregnant, mature), ventral aspect × 300. (After *Elfinger.*)

A papule is formed which is attended with itching, and sometimes even actual pain in people with thin and delicate skins. At first it is surrounded by a very bright scarlet halo, from which the bite itself is hardly distinguishable; this halo fades rather quickly, leaving a

central hæmorrhagie spot elear and distinet behind it. The spot rapidly beeomes fixed, and does not fade when pressed on; is at first reddish-blue, but after undergoing the usual eolour-changes, finally disappears. While it exists, however, the eentral puneture in it made by the inseet's bite ean usually be deteeted, and this is important from a diagnostie point of view. Flea-bites, while most numerous on portions of the body closely embraeed by the underelothing (neek, wrists, buttoeks, ankles), are not neeessarily absent from the more exposed parts, as hands and faee. The inseet, when satisfied, seeks shelter in the folds and ereases of the underclothing, especially about the neek and wrists, and there deposits

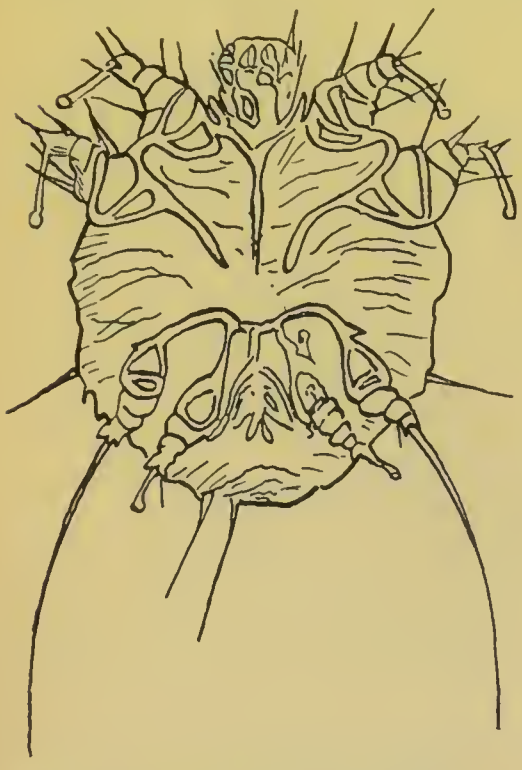

Fig. 7.—Acarus scabiei (male, mature) × 300. (After *Elfinger*.)

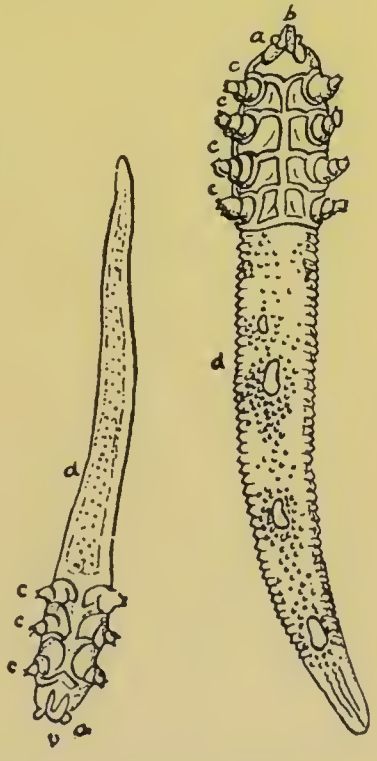

Fig. 8.—Acarus folliculorum, immature and mature. (After *Küchenmeister*.)

its ova, whieh are white in colour, and its fæces, which are dark brown or blaek. The site of the eruption, the presenee of a puneture in each of the petechiæ, the absence of pyrexia, mottling of the skin, brown tongue, and cerebral symptoms should distinguish

TREATMENT.

Constitutional.

Local.

Clavus—

Soak in hot water, and paint occasionally with liq. potassæ.

Remove *cause*. Loose boots rub; tight boots press. (Boots should be well-fitting, with broad sole, straight inner border, and square tip).

To remove cuticle—

Soak in hot water, or cover with water dressing and oiled silk. When softened, pare and enucleate.

Apply fresh glacial acetic acid, or

℞ Ac. salicylici, ℥ss
Collod. flexile, ℥i
Ex. cannabis indic., gr. v

Sig. Paint the part each night for a week.

at once from typhus; although it must not be forgotten that pyrexia may be present, though due to another cause.

The *bites of the bed-bug* excite a series of local disturbances more intense than those set up by the bites of the common flea. The itching is severe; the local lesions are usually large pomphi, in the centre of each of which can be seen the mark due to the wound made by the insect. The primary lesion is nearly always accompanied by excoriation of the skin produced by scratching. This, with the knowledge that wheals and itching appear during the night only to disappear in the morning, should always raise the question of the presence of the cimex as an exciting cause.

These insects love the darkness, and hide in the crevices of timber beams, old walls, behind the skirting of rooms, and about old wooden bedsteads. They issue from their retreats during the night to feed upon the blood of the sleeper or those who may be in attendance upon the sick in such a place. The introduction of a light scares them from their victim, to whom, however, they return when the light is withdrawn. *Hebra* says they can bear cold and hunger for long periods; this, and the difficulty of finding their hiding-places during the daylight, makes their extermination a somewhat tedious matter.

HYPERTROPHIES AND TUMOURS OF THE SKIN.

1. Callosity is hypertrophy of the horny epidermis at special parts which are exposed to *intermittent* pressure or *intermittent* friction. It is a provision of nature to protect the true skin. Example, horny hands of "sons of toil," and soles of feet of those who go habitually barefoot.

2. Clavus—the corn—occurs oftenest on the foot, and is produced by concentric pressure, plus friction. As in callosity, there is hypertrophy of the horny epidermis; but by the concentric pressure the layers of epidermis have the direction of their growth diverted, and impinging on one another, are pushed inward toward the cutis vera, which is irritated and undergoes atrophy. There is thus an ingrowing kernel of horny epidermis called a *corn*, which is surrounded by the thickened layers of epidermis, called

TREATMENT.

Constitutional.	*Local.*
	Clavus—continued. "Soft" corns should be made dry by introducing absorbent cotton wool between the toes, and dusting with drying powders.
	Verruca—
Tonics. Antistrumous and antisyphilitic remedies.	Soften by (1) Soaking in warm water, (2) The use of water-dressings, or (3) Painting with liq. potassæ. Then touch with (*a*) *pure fresh* glacial acetic acid, (*b*) chromic acid, or (*c*) liquor. hydrarg. nitrat. acid.
	Venereal warts— Remove with scissors curved on the flat, and touch with nitric or chromic acid.
Antisyphilitics.	If few, but moist and stinking, dust with calomel. If many, and likely to bleed freely, excise the part.
	Moles— Avoid irritation; they are apt to become the seat of the most virulent form of multiple cancer.
	Bunions— *Preventive* best. In children, especially girls, guard against (*a*) flattening of the arch of the tarsus from overwalking or overstanding; (*b*) cramping the feet longitudinally; (*c*) altering the axis of the great toe. *Curative*— Avoid bunion plasters, which only modify pain and do not cure the disease. (1) Remove pressure, water dressing to allay pain, then apply (*a*) small blister, or (*b*) ℞ Hydrarg. iodid. rub., gr. x Adipis., ʒi m Sig Apply night and morning.

callosities. The pressure which produces the corn is not only *concentric*, but *intermittent;* constant pressure produces atrophy.

Corns are of two kinds, "hard" and "soft." The soft corn is usually situated between the toes, grows more quickly, owing to the greater moisture, and is more sensitive and painful than the hard corn.

3. VERRUCA—the wart—is often present in considerable numbers on the surface of the skin. Warts essentially consist of elongated papillæ over which the epidermis has become thickened, forming small, firm, round, or oval bodies raised above the surrounding tissue. They occur chiefly in children, and in crops are associated with scrofula. Under local irritation, especially if on the face, they are apt to become epitheliomatous in character.

Varieties—

(1) *Verruca simplex;* flat, sessile. They occur anywhere over the surface (fingers, ears, neck, mouth).

(2) *Verruca digitata;* pedunculated; are commoner on scalp.

(3) *Verruca subungualis;* beneath the nails; very painful.

Venereal warts are longer than true warts, and are moist, contagious, and pedunculated. They are found on the glans penis, prepuce, and labia.

4. NÆVI PIGMENTOSI, or MOLES, are not to be confounded with true nævi. They are spots on the skin which may be elevated above the surrounding surface, but are not usually so. They are very common and may be colourless, but are usually pigmented and beset with hairs. They are covered with almost normal epidermis, but the cutis vera is replaced by masses of large epithelial cells, almost sarcomatous in character, and separated by strands of connective tissue. They are the survival of a fœtal condition, and are congenital. They are of no importance beyond the disfigurement they produce.

5. EPHELIDES have been already referred to under the subject of *Maculæ*, page 9.

6. BUNIONS are bursæ formed over a tarsal or metatarsal articulation by excessive or long continued pressure. The usual condition is to find the great toe turned outward, and the pressure exerted on the tarso-metatarsal joint, but occasionally the bursæ are found even on the dorsum of the foot. These bursæ are formed

TREATMENT.

Constitutional.	*Local.*
	Bunions—
	If suppuration occur—
	(*a*) In young and robust, open and excise; (*b*) in old, avoid incision; gangrene is apt to follow from defective circulation. If the joint be destroyed, amputation should be resorted to.
	Molluscum contagiosum—
	Snip off the pedunculated tumours, incise the sessile ones, and cauterize with liq. hyd. nit. acid.
	Many transfix the tumour across its centre, and then press out the contents between the thumb-nails.
	Removal with the knife.
	Every precaution should be taken against hæmorrhage, which is apt to be excessive.

by nature in an attempt to protect the joints from injury. In extreme conditions inflammation and suppuration of the bursæ are apt to occur, producing tedious and intractable sores. The formation of bunions is favoured by the use of boots which are too short; these compress the foot longitudinally, and increase the arch of the tarsus.

7. Molluscum contagiosum is characterized by the appearance of small globular outgrowths from the skin, occurring anywhere on the body, but most frequently on the face, especially on the eyelids. Each individual outgrowth has been compared to a pearl button, which these bodies closely resemble in size, shape, and central depression. In colour they are pink or translucent, usually sessile, but may be pedunculated. They are unaccompanied by pain or itching, are multiple in number, and occur chiefly in children. They are *clearly contagious*, though what the exact contagium consists in is yet unknown. *Coats* views them as enlarged sebaceous glands. *Beale* and *Virchow* think the condition originates in the hair follicles.

8. Fibroma molluscum or Molluscum fibrosum may be compared with the preceding. These consist of tumours in the substance of the skin, which are sometimes present in enormous numbers. They are composed of connective tissue with an excess of small spindle-cells; are abundantly supplied with blood-vessels, and present generally the naked-eye characters of the *hard fibroma*.

9. Keloid, or Kelis, was first described by Alibert, and is the *True Keloid* or *Cheloid* and the same as *Alibert's Cancroid*. It is a disease beginning in flat papules, which have at their margins branching finger-like processes extending outward. The papule and its processes drag on the surrounding tissue, puckering the skin like a contracting cicatrix. These papules are usually situated on the chest, front or back, are white or rosy-red in colour, dense and firm in consistence, and never crust, nor scale, nor ulcerate. *Sometimes* only are they burning, or itchy, or painful on pressure. Their progress is *slow*, and they are apt to return in the cicatrix formed after their removal. They are composed of dense connective tissue mixed with spindle-cells, and *Virchow* regards them as being really sarcomas.

TREATMENT.

Constitutional. *Local.*

Keloid—

Treatment very unsatisfactory.

Leave the papules alone; if itchy, you may use weak alkaline solutions.

10. False Keloid, or *Spurious Keloid*, consists of localised thickenings *usually* in the centre of large cicatrices, from which raised processes pass outward as in the true keloid. They may, however, occur in *non-cicatricial skin*, but, by the contraction they produce, present the appearances of a cicatrix.

11. Scleroderma adultosum, or *Scleriasis*, or *Addison's Keloid*, or *Morphœa* is characterized by thickening and induration of the skin, occurring at first in patches of variable shape, which spread slowly, and are attended by tingling or anæsthesia. These patches are level with, or only slightly elevated above, the surface of the skin; vary in colour from ivory to brown; and when they disappear leave discolorations, with atrophy and cicatrices on the surface. As the disease spreads the skin becomes "hidebound" and hard as a board, wrinkles are obliterated, sensation is diminished, laughing is rendered impossible, and the patient may die of starvation from inability to move his jaws. The disease affects the face, chest, and arms; occasionally it is unilateral.

Addison's Keloid is a variety in which the patches send out prolongations into the surrounding healthy skin, the "hidebound" condition becomes very pronounced, and if the skin adhere to the subjacent tissues the muscles will waste.

Do not confound with *Addison's Disease*, a totally different condition (see page 104).

Scleriasis diffusa, *Sclerema*, *Scleroma*, is a variety of the disease occurring chiefly on the continent of Europe, and which is marked *by the rapidity with which it progresses.* The tongue may be involved, the skin becomes hard and ivory-like, the arms, hands, and fingers grow stiff, the face is a mask, the whole body like that of a "frozen corpse."

Sclerema neonatorum is a swollen and parchment-like condition of the skin found in the newly born. It is sometimes hereditary. The children are weakly, and die in a few days.

Pathology of the disease.—There is present atrophy of the skin with chronic inflammation; the papillæ are flattened; the skin is thinner, less fibrous, and with more homogeneous connective tissue in it than usual (rendering it somewhat cicatricial in character). Hairs and subcutaneous fat are both atrophied, and in the scalp it causes alopecia. Abundant nuclei are found

Treatment.

Constitutional.

Avoid exposure to cold and vicissitudes of temperature, fatigue, irritation, injury.

It is incurable, but palliative treatment may be adopted.

Samson Gemmell recommends—

(*a*) Removal of leper to an atmosphere which is *dry* and *bracing*.

(*b*) The internal administration of

(1) Gurjun Balsam, 10-15 ♏ in milk.

(2) Hoang Nan in 3-grain pills; or

Arsenic, Potas. iodid., Iron.

Local.

Elephantiasis arabum—

Do not allow the part to be pendulous.

Hebra—

(1) Removes all scales and crusts by poulticing.

(2) Rubs in Ung. hydrarg.

(3) Elevates the limb.

(4) Bandages evenly and tightly with a cotton bandage dipped in water at the time of application. A fresh bandage should be applied whenever the first becomes loose.

M'Call Anderson—

Used Martin's india-rubber bandage.

Bryant—

Ligatured the femoral artery with success, but this failed with *George Buchanan of Glasgow*.

Removal of the enormous mass by surgical means is the only treatment.

Elephantiasis Græcorum—

Inunction of skin with Chaulmoogra oil.

Beaven Rake excises and scrapes the nodules, apparently with good effect.

in the altered skin, especially near blood-vessels and sebaceous glands.

12. Elephantiasis, or *Elephas*, or *Pachyderma*, or *Bucnemia tropica*, or *Barbadoes leg*, or *Elephantiasis Arabum* (not *Elephantiasis Græcorum*, which is leprosy) is a localised thickening of the skin, caused by intermittent erysipelatous attacks. These end in producing a progressive new formation of connective tissue, which assumes the character of a tumour. The tissue formed is a loose, succulent, connective tissue like that of the skin, but containing more cells, and so more like inflammatory tissue. The epidermis is also thickened, so that the whole process resembles an exaggerated hypertrophy of the skin. The new formation may extend inward to the fasciæ, and even to the periosteum, producing thickening of the bones. *Virchow* believes it to be connected with the lymphatic system. It occurs chiefly in adults, and oftenest in *men;* its progress is usually *slow*, but this depends upon the conditions under which the patient lives. Fatigue, exposure to irritation, and similar conditions will aggravate it. Want of cleanliness predisposes toward ulceration, which, if it occur, is never followed by cicatrization, but goes on to gangrene and death. It occurs most frequently in India. Its chief seats are (1) the legs—here it begins at the ankles and spreads upward; (2) scrotum or labia—these become enormously hypertrophied (50 to 100 lbs. in weight); (3) the mammary glands in the female.

Cause very obscure. *Coats* says it is due to a virus. *Carnochan of New York* holds it to be *associated* at least with enlargement of the arterial trunks of the part. *Manson of China* says it is due to an embolism of the lymphatics, produced by the ova of the *Filaria sanguinis*. These, he thinks, block up the lymphatics, and produce exudation of lymph, together with chyluria.

13. Elephantiasis Græcorum (*Leprosy*), or *Leontiasis*, is the *Lepra* of Continental literature, and must not be confounded with the Lepra of England, which is Psoriasis. *Elephantiasis Græcorum* has already been briefly referred to in the section of diseases due to parasites. It may be defined to be a specific disease, due to the action of a fission-fungus, and characterized by the slow development of nodules in the skin, mucous membranes, and nerves. It

is followed by anæsthesia, paralysis, ulceration, and gangrene. *Elephantiasis Græcorum* is endemic in many countries, and has existed in the East from the earliest times of which we have any knowledge. In Europe, though previously present, it became epidemic in the twelfth and thirteenth centuries, and was said to have been introduced by the returning Crusaders. It greatly diminished toward the end of the seventeenth century, but is still present in parts of Portugal, Spain, Italy, Greece, and Russia; it is now very prevalent in Norway, Sweden, and Iceland; Central and South Africa, South America, China, India, and the West Indies show many examples of the disease; but its favourite habitat is the Sandwich Islands.

Its *cause* was for a long time regarded as very obscure. It is now known to be *associated*, at least, with the presence of the *Bacillus leprœ* in the blood and tissues of those affected; and that this bacillus is the actual *cause* of the disease is rendered probable by these facts—(1) that it is found in *both* varieties of leprosy (*Lepra tuberosa*, *Lepra anæsthetica*); (2) that it is found independently of the country in which the disease has been acquired; (3) that it is found in the blood, lymphatic glands, nerves, skin-tumours, liver, spleen, and mucous membrane of the mouth, palate, and larynx. Temperature, soil, habits, race, and food have all been held as at least predisposing causes; a special predisposition towards the acquirement of it seems to be transmitted from parent to child. It is frequently present in low-lying and marshy districts, as on the banks of rivers; and, though not absent from among the better classes, is commonest among the poor and filthy. The question of whether it can be spread by infection or not is still a debatable one; and it would seem that, if this actually takes place, it can only be under very favourable predisposing circumstances.

The *symptoms* usually begin in early adult life. They are first malaise, lassitude, and depression, followed by rigors, sickness, and loss of all appetite for food. These symptoms may continue to be present in varying severity for an indefinite time, but sooner or later the characteristic skin lesions become visible. Scattered over the surface of the body, a series of livid blotches appear, and these remain out for two or three weeks; they then subside, and are

followed by other similar blotches. These maculæ are circular, elevated, and tender, and vary from half-an-inch to two or even three inches in diameter. By and by they remain out longer, and when they go leave brown or very white stains behind them, contracting in their centre. At this stage it may be spoken of as *Lepra maculosa*, and is apt to be mistaken for purpura or scurvy. Later on, in its cicatricial stage, it is *Morphœa alba* or *nigra* (compare with Addison's Keloid) according to the amount of pigment present in the stains.

Following this stage, the specific phenomena now appear in—

(*a*) Skin and mucous membranes, forming *Lepra tuberosa.*

(*b*) Nerves, forming *Lepra anæsthetica.*

(*c*) Both skin, mucous membranes, and nerves.

Most commonly, however, the affection is limited to either (*a*) or (*b*).

Varieties—

1. *Lepra tuberosa*, commonest in temperate climates, occurs mostly on the face and hands, but also on the legs, if the latter be much exposed to the weather. There appear swellings, which vary in size from a hazel-nut to a walnut; at first they are of a blue or red colour, but latterly they become yellow or bronze-like in tint. By degrees these swellings gradually grow firmer and harder; they have no pain in themselves, but are tender when pressure is made upon them. After a long time they undergo fatty degeneration, and if irritated by injury, filth, or exposure, they readily ulcerate. When they occur on hairy parts, the hairs and sebaceous glands become atrophied. The conjunctiva is specially apt to be affected, and inflammation, suppuration, and perforation of the cornea to ensue. When the larynx is involved the nodules ulcerate more readily, and leave deeper cicatrices; these, in contracting, narrow the laryngeal channel, and hoarseness and a characteristic cough are developed. On the face the deformity produced by cicatrization is very notable, and this region assuming a knobbed or gnarled appearance has occasioned the use of the term "leontiasis." On the limbs the nodules occur chiefly on the extensor surfaces, and in the later stages of ulceration the limbs may drop off, piece by piece, at the joints.

The nodules consist of granulation-tissue containing an

Treatment.

Constitutional.	*Local.*
	Elephantiasis Græcorum—
	It is questionable if it be ever cured. But it may be greatly relieved by intelligent treatment.
	First, soothe any red, raw surfaces or deep fissures by sedative ointments, as in Eczema.
	Second, promote cleanliness by removing all old crusts and dry sebum.
	(*a*) By warm baths (alkaline).
	(*b*) By free friction with soft soap and a flesh brush.
	(*c*) By replacing the deficiency in the natural lubricant of the skin with oils, ointments, or glycerine.
Cod liver oil internally.	

abundance of cells about the size of leucocytes; these are more or less completely filled with bacilli. In the older nodules large multi-nucleated cells are to be found, and these also contain numerous bacilli in their interior. The bacilli are commonly arranged in rows radiating from the centre of the cell to its circumference; more rarely they occur in parallel bundles in the interior of the cell. *Beaven Rake* and *Buckmaster* have succeeded in cultivating the bacillus in blister serum.

Each bacillus is from 4 to 6 micro-millimetres in length, and less than 1 micro-millimetre in breadth, and resembles generally the tubercle bacillus. Their length is more uniform, however, they are less seldom curved, and they absorb the aniline stains more greedily, and retain them more tenaciously than do the tubercle bacilli.

2. *Lepra anæsthetica* is specially common in hot climates, and often exists without the development of nodules of any kind whatever. Its occurrence is preceded by hyperæsthesia (burning, tingling, and sensitiveness to cold); this is followed by anæsthesia, and it may happen that an area of numb sensation is surrounded by a ring of increased sensitivity. These conditions may alternate as the disease progresses, so that parts which at one time were anæsthetic become hyperæsthetic, and *vice versa*. Together with the occurrence of these phenomena maculæ may appear in the skin, but these are often entirely absent throughout this form of the disease.

But it is to be observed that not only sensory but motor nerves are involved in the gradual extension of *Lepra anæsthetica*, and so twitchings and jerkings of the limbs, which set in about this period, are followed by muscular weakness, atrophy of fat and bone as well as of muscle, a "shrinking" of the whole affected region, and cicatrization of the skin there. After a time gangrene makes its appearance; this may begin at the surface and extend gradually to the deeper structures, or it may begin deeply and gradually creep toward the surface. Separation of the bones, and at the joints, is after this only a matter of time.

The parts first affected, and those which suffer most severely, are the hands and forearms, feet and legs, especially the muscles

Treatment.

Constitutional.	*Local.*
Tonics, if health be broken down.	*Ichthyosis—* *Milton* insists on the curability of Ichthyosis by the use of the vapour bath, provided it is only carried far enough. *M'Call Anderson* uses the warm bath and the vapour bath alternately; and then applies, each night and morning, ℞ Glycerini, ℥iij Ung. bism. oleat., ℥vi To maintain the good effect the frequent bathing must be kept up: the inunction of lubricants must also be maintained, gradually lengthening the intervals between each application.

supplied by the ulnar nerve.* The palm flattens, the thumb becomes separated from the other fingers, the latter are extended as far as the first joint, but fixed at the second and third, and in this way is produced that claw-like form of hand which follows paralysis of the ulnar nerve.

In *Lepra anæsthetica* the nerve-stems become the seat of spindle-shaped granulation-tissue tumours. The granulation-tissue develops in the interstitial connective tissue, so that the nerve-fibres are separated and compressed. This is what produces the anæsthesia.

Death is the ultimate result in both forms of the disease. In *Lepra tuberosa* it occurs in from eight to ten years after the first appearance of the disorder; in *Lepra anæsthetica* in from sixteen to eighteen years. In both it is due to a gradual impairment of the nutrition, to which are added various complications, such as phthisis, dysentery, and kidney affections.

14. Ichthyosis—*Fish-skin Disease*—is of two kinds—

(a) *Ichthyosis simplex* or *Xeroderma;* and

(b) *Ichthyosis cornea* or *Ichthyosis hystrix.*

(a) *Ichthyosis simplex* or *Xeroderma* is the commoner of the two forms, and is congenital. It is due to an hypertrophy of the horny layer of the epidermis, followed by the production of scales, which, mixed with sebum, give to the skin a polished look. These scales are fixed in their centre and project at their edges, and thus present a somewhat imbricated appearance. The skin itself is harsh and dry, most markedly so in winter, and at the parts subject to friction becomes very thick and hard, and blackened if much exposed. Indeed the condition often first attracts attention from the difficulty experienced in keeping the infant's skin clean. With advancing age the appearances become more characteristic. The sudoriparous glands are closed, and the sebaceous glands are filled with hard dry sebum which projects from them. The disease is now very general, but is least noticeable on the palms and soles and flexor surfaces; it is well marked on the *neck* and

* Flexor carpi ulnaris, Flexor profund digitorum (inner half), Palmaris brevis, Interossei, two internal Lumbricales, Adductor pollicis, inner half of Flexor brevis pollicis. The abductor, flexor brevis, and opponens, minimi digiti, and the abductor indicis, are also involved in the disease.

Treatment.

Constitutional.

Good food—

Cod liver oil, in full doses.

Nourishing diet.

Good malt liquor with food.

Healthy surroundings—

Change of air (not to sea coast, which makes the condition worse).

Regular hours.

Tonics—

℞ Syr. ferri. phosph.
Syr. ferri. iodid.
Syr. phosph. co., āā ℥i
Sig. ℥i in aq. ter in die.

Local.

Lupus—

The first indication is to destroy the abnormal tissue.

The second, to promote cicatrization of the remaining tissue.

The first is accomplished by—

(*a*) Painting the surface with liq. hyd. nit. acid once a fortnight and then poulticing.

(*b*) Startin's arsenical paste.

℞ Acidi arseniosi, ℥iij
Hydrarg. bisulphuret., ℥ij
Hydrarg. subchlor., ℥i
Aq., q.s. ut fiat massa.

This is a painful application, and requires the use of chloroform, as also does

(*c*) Very thorough scraping with Volkmann's sharp spoon.

(*d*) The thermo-cautaire.

The second indication is accomplished by the use of astringents and sedatives, as

1. Ung. bism. oleat.
2. Glycerini ac. tannici.
3. Liq. plumb. subacetat.

shoulders, *elbows*, and *knees*. The affected surface is mapped out into irregular patches, each of which is separated from the other by one or more large deep creases. The condition is free from itching.

(b) *Ichthyosis cornea* or *Ichthyosis hystrix* is much rarer than the former variety, and occurs in localised patches, which tend to spread. These consist of hard, dry, horny processes of epidermis, which project half-an-inch or more above the general surface of the skin. They are partly produced by an hypertrophy of the epidermis and partly by a horny change in the epidermic lining of the sebaceous follicles. In the latter case the horny outgrowth first appears like a comedo, which distends the mouth of the follicle, and projects from it like a little carraway seed. This grows in length and in breadth till the sebaceous follicle forms a mere shallow pit. This pit itself becomes effaced, and what was at first the inner aspect of the follicle becomes level with the surface of the skin, then projects above it, all the while continuing to produce the horny outgrowth. Finally, this tendency to horny development extends from the follicle to the epidermis around it. These horny projections readily absorb dirt and become opaque, or even black in colour.

NEW GROWTHS.

1. Lupus is a disease of the skin, usually of the face, and occasionally involving the neighbouring portions of mucous membrane. Certain rounded prominences termed "nodules"—never "tubercles"—of a red, purple, or violet colour, appear in the skin of the affected part. These are unaccompanied by any great disturbance of sensation, and if any complaint be made, it is merely of *tingling* or *itching*. The after history of the nodules varies from this point. They may either—

(1) Gradually subside, leaving pale, greyish-white, depressed cicatrices behind them; or

(2) Before cicatrizing, become thickly covered with adherent scales or crusts; or

(3) Suppurate almost from the outset, and become crowned with thick adherent scabs; or

Treatment.

Constitutional.	*Local.*
	Lupus—continued.
	Koch's subcutaneous injection of tuberculin seems to succeed in some cases, but it may be wise not to adopt this method too hastily.
	In the inflammatory stage use sedatives.
℞ Potas. iodidi, ʒi Syr. ferri iodidi, ʒiv Aq., ad ʒvi ℔	
Sig. ʒss.	
	If chronic, stimulate by using: (*a*) ℞ Hydrarg. perchlor., gr. xij Tinct. saponis., ʒvi ℔ (*b*) Liniment of iodine night and morning. (*c*) ℞ Ac. pyrogallici. Glycerini, āā ʒi Lanolini, ʒi Misce benc. applied to a limited surface only.

(4) Produce extensive destruction of the tissues in which they occur.

Accordingly, several varieties are described—

(a) *Lupus vulgaris* is *very chronic*, and generally appears before puberty, or from then till twenty-five years of age, especially in scrofulous subjects. It is commonest on the *face*, beginning as small gelatinous-looking nodules, which are seated at the junction of the skin and mucous membrane of the *nose*, *lips*, or *eyelids*. These nodules are reddish or violet in colour, and are covered with thin scabs or scales; they slowly increase in number and size, and often merge in each other.

If at this stage these nodules be slowly absorbed, leaving behind them scars which were not preceded by ulceration (b) *Lupus non-exedens*, or *Lupus non-ulcerens*, may be applied appropriately to describe the condition.

If, however, the absorption has been preceded by marked ulceration, often extremely deep, with very slow recovery, resulting in ugly scars *which have little tendency to contract*, it is (c) *Lupus exedens* or *exulcerens*. This variety often occurs in the nose, and produces destruction of the septum nasi and cartilages.

(d) *Lupus erythematodes* appears oftenest on the cheeks, nose, forehead, and scalp, but is not limited to these parts. If the nose and both cheeks be involved, it presents a shape somewhat like that of a butterfly spread out, the nose looking like the body of the insect, and the involved parts of the cheeks like the outspread wings. It begins as small, reddish, flat *spots*, which slowly and irregularly extend at their periphery, till finally they coalesce and form distinct patches, which have the characteristic blush upon them. *The margins are always more or less scaly*, and the *centres* of the spots are *red*, *purple*, or *violet* in colour. As the disease extends at the periphery it may become extinct in the centre; this is known by the disappearance of the blush. It is never papular nor pustular, and *never leats*. It may become crusted, however, with sebaceous matter, and thus be mistaken for *Lupus vulgaris*. Its course is extremely chronic; it is accompanied by little or no pain; and complaint is made chiefly on account of the deformity which it produces. It may be mistaken for epithelioma.

Treatment.

Constitutional.

Use every means to maintain the general health.

Local.

Rodent Ulcer—

Under chloroform, scrape well with Volkmann's spoon, taking great care to remove the elevated edges; then apply strips of lint soaked with

℞ Sod. salicyl., ℥i
Glycerini, ℥ss
Aq. dest., ℥i
Solve.

Lupus Erythematodes.	*Epithelioma.*
Oftenest in females.	Oftenest in males.
A disease of youth (in origin).	A disease of old age.
Nose the favourite seat.	Lower lip the favourite seat.
Glands uninvolved.	Glands involved.
May tend to heal.	Never heals.
No cachexia.	Cachexia usually present.

Edges more everted, more indurated, more undermined than in Epithelioma.

Pathology of Lupus.—The lupus nodule consists of skin in which the derma has been replaced by a tissue which is full of round, epithelioid, and giant cells, all of which tend toward degeneration. It is generally regarded as of strumous origin; some say it is a manifestation of syphilis in strumous subjects. It certainly occurs frequently in those who are suffering or have suffered from strumous suppuration of the cervical glands, or who are otherwise below the normal standard of health. It is common in women and children, especially those of the poor, and exacerbations are apt to occur in temporary conditions of ill-health.

2. Rodent Ulcer is carcinoma of the skin. It never occurs anywhere except on the face, and there its site is on the nose, cheek, or temple. It may originate in a mole, and in such case assumes the discoloration of that congenital skin affection. Often, however, it has a peculiar pearly appearance, and its surface is streaked with delicate blood-vessels. At this stage it may be mistaken for *Molluscum contagiosum.* When ulceration occurs, the crusts formed have a brownish-red colour, and are firmly adherent to the edges of the ulcer. Later on it assumes a chronic and indolent appearance; it edges are distinct, firm, and elevated, and there is a total absence of any tendency toward healing. Its gradual extension does not affect the lymphatics or lymph-glands in its neighbourhood.

Rodent ulcer is a disease occurring only in people beyond middle age.

SYPHILODERMIA is a collective term, and includes all the wide variety of skin lesions directly traceable to the action of the

syphilitic poison upon the skin. One primary lesion or several may be present at one and the same time; this forms the (1) *polymorphism* which is so striking a feature of this class of disease. Maculæ, papulæ, pustulæ, and squamæ, may all be mixed up with an extensive erythema; this in itself, though not conclusive, is a highly suspicious circumstance. (2) *Situation* is an important factor in the diagnosis of a syphilide. The forehead, palms, and soles are the favourite sites, although in the two latter we have seen that smallpox, eczema, and psoriasis, apart altogether from syphilis, may occur. (3) *Shape:* a syphilitic skin-lesion is circular or semicircular in shape; this also is not peculiar to syphilis, but taken with the other signs offers strong corroboration. (4) *Colour* is peculiar in this class of diseases. In the early stage the stains are of a "raw-ham" like tint; in later stages they assume a "coppery" hue. This sign also has weight only in association with others, for in long-standing venous obstruction, leading to very chronic non-specific eruptions, as in the ulcers on the varicose legs of old people the hue is often of an undoubted "coppery" nature, although there has never been any syphilitic infection. (5) *Symmetry* is usually insisted on as a distinguishing characteristic of a syphilitic eruption, though *Hilton Fagge* does not believe this. (6) Absence of itching; (7) absence of pyrexia; (8) the presence of a hard chancre; (9) rolling glands in the groin; (10) the history of infection; and (11) the disappearance of the syphilodermia under specific treatment confirm the diagnosis.

Congenital Syphilis is usually accompanied, sooner or later, by some skin manifestation. Fissures of the lips; erythematous patches about the nose, upper lip, buttocks, and ankles; and mucous papules at the anus are some of the commoner forms, and these are confirmed by other constitutional symptoms in the patient.

EXANTHEMS.

It is not to be forgotten that febrile rashes may be mistaken for ordinary non-febrile skin-diseases. But the use of the clinical thermometer will at once separate the one class from the other. One exanthem may, however, be mistaken for another. The history, character of rash, co-existence of other symptoms, compli-

cations, and sequelæ must all be taken into account in forming an accurate diagnosis. Further, one exanthem may *co-exist* with another, that is to say, as a measles rash fades a scarlet rash may appear in one who has been exposed to the infection of both. Such cases are far from being as rare as some writers seem to think. Eruptions produced by the internal administration of drugs, or the local application of irritants to the skin, must also receive consideration from the student as forming possible explanations of the condition presented by the patient. For obvious reasons it is impossible here to discuss the exanthemata in all their bearings; the character of the rash and its sequelæ chiefly claim attention. For further details the reader is referred to the larger text-books; and to the little book by Dr. Allan on "Outlines of Infectious Diseases"—if he can get it.

1. MEASLES. The eruption appears on the third or fourth day from the apparent onset of illness; it consists of isolated spots which have the following characters:—

Situation.—They appear *first* on the head and face; thence they extend to the rest of the body. They are often first detected behind the ears, and on the forehead close to the roots of the hair. As a rule the eruption is well marked on the back and buttocks.

Size.—The spots are the size of an ordinary split-pea, but may be as large as a threepenny piece.

Shape.—Irregularly circular, coalescing to form patches with spaces of unaffected skin between.

Colour.—They vary in colour from *dark crimson* to *purple* or *blue.*

Consistence.—Are firm; smooth; *slightly raised to the touch.*

Distribution.—General over the body.

Duration.—Short; seldom persist more than two days, after that begin to fade. Leave *maculæ*, which undergo colour-changes, showing that they are true ecchymoses; at first dark-red or purple, they become brown or yellow by degrees, and slowly disappear.

Desquamation.—Of a fine "chippy" kind; follows the fading rash, and goes on for a week or rather more. Well marked on back.

Varieties.—(1) The rash may be sparse and discreet. If without much pyrexia the case will be mild. If the pyrexia be

marked, bronchitis, pneumonia, or diarrhœa may be expected to set in. (2) The rash may be purplish-blue or livid in colour. Pyrexia and delirium persist, followed by prostration, cardiac failure, and death.

Measles may be mistaken for purpura, scurvy, smallpox, and rashes produced by bromide and iodide of potas. and chloral hydrat.

2. Rötheln or German Measles. The eruption appears upon the first or second day of evident illness; in some respects it resembles that of measles, in other that of scarlet fever. Between Rötheln and mild cases of scarlet the distinction is often very difficult —the character of the desquamation in the latter is probably the most reliable sign. It may also be confounded with *Erythema roseola*, and has been compared to the bright red blush produced on the skin by handling the hairy larvæ of sundry insects (Bombyces).

Comparison of the signs of a typical case of Rötheln with one of measles and one of scarlet fever—

	Measles.	*Rötheln.*	*Scarlet fever.*
Catarrh	Preeedes the rash; pronounced.	With the rash; slight.	None.
Rash	Appears on third or fourth day.	On first or second day.	On first or second day.
	Patchy; mottled; deep rose to purple.	Patchy; less mottled; bright red.	Uniform; vividly red punctiform.
	First on forehead.	First on forehead.	First on chest.
	Lasts two-three days.	Lasts three days.	Lasts three-four days.
Desquamation	Chippy.	Very fine.	Thick; tough; moist.
Angle-glands	Rarely enlarged.	Not enlarged.	Usually enlarged.
Glandulæ concatenatæ	Seldom enlarged.	Usually enlarged.	Seldom enlarged.
Tongue	Furred; papillæ normal.	Furred; a few enlarged papillæ.	Furred; then strawberry.
Angina	Slight.	Distinct.	Well marked; often severe.

3. Scarlet Fever, or *Scarlatina*. The eruption appears upon the first or second day from apparent onset of illness, and consists of numerous minute punctiform spots which have the following characters:—

Situation.—They often appear first on the mucous membrane of the hard and soft palates; on the surface of the body, first on the sides of the neck below the ears, and on the front of the chest.

Thence they rapidly extend elsewhere. They are usually well marked on the front of the abdomen and inner surface of the thighs.

Size.—The individual spots are minute, as if produced by dabbing the skin with the point of a pin. When numerous, the skin looks as if it were peppered with them.

Shape.—Circular; coalescing with great rapidity, and becoming uniformly diffused.

Colour.—Usually a vivid scarlet; may be light pink in children and mild attacks generally, or an intense fiery red in sharp cases.

Consistence.—As a rule not raised; but over the limbs, especially over the forearm and leg, the rash is often actually papular, and these papules persist longer than the general uniform redness. The papules bear some resemblance to those of acne, but are without the blackened apices of the latter, and differ in site and the history of their occurrence.

Distribution.—Universal usually.

Duration.—Three to seven days; usually four.

Desquamation.—Desquamation begins by the formation of small rounded elevations like vesicles, but without containing fluid. Each of these ruptures at its apex, and gradually enlarges in circumference, forming a small but increasing ring through which the new pink horny layer of the epidermis can be seen. With care a complete cast of the hands and feet may sometimes be obtained.

Desquamation commences at a variable time after the fading of the rash, usually within a week or ten days, though the writer has seen it begin as late as the seventh week. It may take eight weeks or more before it is completed, *but so long as primary desquamation is going on so long is the patient capable of infecting others with scarlet fever.* The period of infectivity in scarlet fever is therefore to be judged, not by so many days, or weeks, or months, but by the question, *Is desquamation complete, or is it not?*

Desquamation in scarlet fever may be fine and branny, and in the absence of other signs and symptoms, might be mistaken for that of measles. Typical scarlet desquamation is tough, moist, firmly adherent (Allan), and peeling off in flakes or strips. In some instances it comes off in actual sheets.

We do not here discuss the infectivity of discharges from ears, throat, nose, &c., as at present these are not under consideration.

The rash of scarlet fever may be mistaken for that of measles, Rötheln, various erythemata, and the eruption produced by the continued administration of belladonna and its allies.

It is very important for the student to remember that the characteristic eruption of both typhus and enteric fevers, and also that of smallpox, may be preceded by the appearance of a bright scarlet blush over the body; this, in the absence of a due regard to other signs and symptoms, may lead him widely astray in his diagnosis.

4. Typhus Fever. The eruption appears on the fourth, fifth, or sixth day from the apparent onset of illness; usually it is toward the evening of the fifth or morning of the sixth day, when it is first observed. It consists of a series of spots, at first isolated, which have the following characters:—

Situation.—They appear first on the back of the wrists, at the edges of the axillæ, and in the interscapular space. Thence they rapidly spread over the trunk and limbs, *appearing on the backs of the hands and feet* (a point of great diagnostic importance), but, as a rule, avoiding the face.

Size.—Small, but seldom minute, the largest from three to four lines in diameter.

Shape.—Inconstant; at first isolated, they become in a comparatively short time irregularly confluent.

Colour.—The individual spots are at first of a fresh florid hue, but within 48 hours they become darker, dingier, and more indistinct. The intervening skin assumes a blurred and faint pinkish haziness, and with this as a background, the typhus spots gradually blend at their edges.

Pressure on the spots *when fresh* drives the blood out of them, but as they become darker in colour, they also become *petechial;* this is due to an actual extravasation of blood into the substance of the skin. Pressure now fails to make the spots fade; they either remain unchanged, or become, at most, of a dirty-yellowish hue.

Consistence.—A fresh typhus rash may at the very beginning be slightly raised to the touch, but later the spots seem to the

finger to be *in* the skin, and not elevated above the surrounding area as in enteric.

Duration.—The spots appear in rapid succession, and usually within 48 hours from the beginning of the eruption the mulberry rash is complete. A few more spots may continue to come out, but these are in addition to the first, which meantime do not fade. The rash persists till the end of the fever, and even after death, should that occur.

If the rash in typhus be profuse, dark in colour, and becoming rapidly livid and petechial, the prognosis is very grave.

5. The Plague, or Black Death, a disease which was once the scourge of this country, is characterized by the formation of painful suppurating buboes in the groin, armpit, or neck, and is accompanied by a profuse petechial exanthem, resembling that of typhus. The petechiæ are, however, more numerous than in typhus, and often coalesce to form vibices. These are the "plague spots" of early writers. Bullæ, pustules, and carbuncles may also be present on the the skin.

6. Enteric Fever. The student is advised to avoid calling this "typhoid" fever, the common name. However interesting that name may be from an historical standpoint, its use in general practice certainly leads to confusion, both in the mind of the physician and in that of his patient.

The eruption in enteric fever appears on the seventh day from the apparent onset of illness, and consists of isolated spots which have the following characters:—

Situation.—They appear first on the lower part of the chest and front and sides of abdomen, not infrequently on the back, and even on the limbs, *but almost never on the backs of the hands and feet.* (Compare with *Typhus.*)

Size.—They are small papules, each about the size of a split pea; "lenticular."

Shape.—They are round.

Colour.—They are pale pink or rosy red in colour. The colour disappears in each on pressure, and somewhat slowly returns when the pressure is removed.

Consistence.—Each rose-spot is *solid* to the finger (a true papule, in fact), smooth and rounded on its surface; almost never with

a minute vesicle on its summit. It is *in*, but also *above*, the skin.

Duration.—The papules appear in successive crops; they last for three, four, or even five days; and as each spot dies down a fresh spot appears elsewhere upon the surface of the skin. The spots never become petechial; and after death they cannot be found if searched for.

A profuse rash in enteric fever has not the grave significance that attaches to a similar condition in typhus; nay, an otherwise mild case of enteric may be remarkable for the extent and amount of the eruption which accompanies it.

Differences between enteric papules ("rose-spots") and ordinary papules or "pimples"—

	Rose-spots.	*Papules.*
Colour:	Pale pink or rosy red.	Deep red.
Areola:	None.	Present.
Suppuration:	Never.	Common.
Pain:	None.	Usually present.
Pressure:	The colour fades, and returns slowly.	The colour fades, but returns at once.
Succession:	Come in regular crops.	Come out irregularly.
Site:	Abdomen usually; rare on legs.	Anywhere; common on legs.

Associated with the characteristic eruption of enteric fever, and often mixed up with it, may be found a series of indistinct purple or bluish discolorations, which are spoken of as "taches bleuâtres." These may be present in other conditions, as well as enteric, and their diagnostic value is but slight.

It is important to note that after both typhus and enteric fevers desquamation may occur, but it is not always present. It differs entirely from the tough, moist desquamation which is typical of scarlet, and approaches more nearly the fine, scaly desquamation of measles. In this stage typhus is highly infective, but in enteric the infectivity is in the alvine discharges.

7. Diphtheria is not infrequently, in its early stage, accompanied by a general erythema of the skin; and this, together with

the sore throat, enlargement of angle-glands, pyrexia, and history of headache and malaise of short duration (usually two days), is extremely apt to lead to the diagnosis of scarlet fever. Probably one-third of the cases of diphtheria certified as such and admitted to hospital are cases of scarlet fever. It is often extremely difficult to tell in the early stage, and when the patient is seen, perhaps, under disadvantageous circumstances, whether one is dealing with diphtheria or scarlet. In both the tongue is covered with thick fur; in both the tonsils are red and swollen; in both the angle-glands are enlarged and tender; in both the temperature is febrile; in both there may be a bright red blush upon the skin; in both there is a history of headache, and perhaps sickness, of short duration. But in diphtheria it is exceptional to find the temperature ranging above 102°-103°; in scarlet, in the acute stage, it is not uncommon to find it touch 104°-104·8°. In diphtheria there is likely to be respiratory difficulty, but not necessarily so; many cases show no respiratory difficulty at this stage. In scarlet, unless the angina is extreme, respiratory difficulty is rare. The erythema in diphtheria is rather a uniform pinkish blush; in scarlet the erythema is punctiform at first, and on the limbs is often accompanied by a papular rash. The tonsils and fauces in diphtheria do not present the *fiery* redness so often seen in well-marked cases of scarlet. In the latter disease, in a day or two the fur disappears from the surface of the tongue, leaving it studded with minute enlarged papillæ; this does not occur in diphtheria. Examination of the urine of a diphtheritic patient shows it often loaded with albumen, and exhibiting numerous epithelial casts below the microscope; these phenomena are absent in scarlet till the end of the third week, and are then accompanied by other signs of nephritis. Scarlet is followed by a desquamation of a very special kind; diphtheria probably by diphtherial paralysis. The presence of typical diphtheritic membrane on the fauces or tonsils would of course go a great way in favour of diphtheria; but this membrane may be absent, or so far down in the larynx as to be invisible to an ordinary examination; and many cases of scarlet present exudations upon the tonsillar surfaces and round the edges of the soft palate that might readily be mistaken for diphtheritic membrane.

Mild cases of scarlet fever are those usually certified diphtheria, to the prejudice of the patients and the anxiety and harassment of those to whose care they are committed. In doubtful cases only a discriminating consideration of each sign and symptom in detail can lead to a correct diagnosis. It need hardly be indicated that to pronounce a well-marked case of scarlet fever to be one of diphtheria is a matter of the gravest import to all concerned.

8. Smallpox was for hundreds of years confused with measles, and regarded as only an intensified form of that disease. The eruption consists of a series of isolated spots which may at first closely resemble those of measles; they are *firm*, *smooth*, *slightly raised* to the touch; appear on the third day from the apparent onset of illness, and may be preceded by sneezing, hoarseness, lachrymation, and intolerance of light. The temperature is highly febrile. All these signs closely resemble those usually associated with measles, and hence the readiness with which a mistake in diagnosis may be made. But in smallpox, at the outset, the isolated spots are better *felt* than seen; to the finger they seem like small shot under the skin, and though at first the surface over them is scarcely redder than that in their immediate neighbourhood, after 24 hours the area over the papules is seen to be quite distinctly red in hue. The severe rigors, headache, and sickness usually associated with smallpox, together with *the characteristic pain, amounting almost to torture*, in the sacrum and loins (and also in the epigastrium, if there has been much retching and vomiting), sufficiently differentiate that disease from measles, although it is right to state that in mild cases of smallpox all these symptoms may be slight in degree. The subsequent course of the disease will alone, in such cases, clear up the diagnosis.

The eruption in smallpox is first papular, then vesicular, and in the end pustular. It first appears upon the face and scalp, being particularly noticeable on the forehead and nose. Thence it spreads, first to the chest and arms, and then to the abdomen and legs. The inner surface of the lips and cheeks, and the soft palate show the eruption, and it also occurs on the palms and soles.

Each papule is at first smooth and round, about the size of a split-pea, or a little larger. It quickly becomes vesicular, and at

this stage the eruption presents an opal-like appearance. Each vesicle shows in its centre a little depression, and this is characteristic of the disease; it is known as the phenomena of *umbilication*. The fluid in each vesicle becomes gradually purulent in character, —*i.e.*, the stage of *maturation* has been reached. This change is complete about seven days after the first appearance of the papule. The pustule may now either (1) rupture, and give exit to thick pus which dries and forms an adherent crust, or (2) dry up without rupturing. The crusts may be yellow or brown in colour, or even black if much blood has mingled with the pus. They separate in a variable time after their formation, and leave purplish-red stains behind them. If the true skin has been involved in the suppurative stage, the drying and subsequent separation of the crusts takes longer to accomplish, and cicatrices are left, which gradually become whiter in colour, and deeper than the surrounding tissue. This is the "pitting" of smallpox.

It is to be remembered that each smallpox pustule is *multilocular*, and that each loculus is really a little pocket containing the contagium of the disease. Thus either the pus itself in a fluid state, or dried in the form of crusts, is potent in spreading the disease far and wide.

When the eruption is scattered and sparse it is spoken of as "discreet," when profuse and the individual papules are in contact at their edges it is "contingent" or "cohering." When the papules run together into large irregular patches with but small areas of skin between, it is "confluent." A specially grave form of the disease is the "hæmorrhagic" variety; in it the papules are of a dark-blue colour, and do not go on to complete pustulation as in the ordinary course: hæmorrhages occur from the gums, lips, kidneys, and other mucous surfaces, the conjunctivæ are injected, the tongue is swollen, and the breath is very fœtid. Marston has described a variety which he calls "corymbose;" this, however, is rare.

It may be noted that "mild" and "abortive" instances of smallpox occur, in which the eruption is slight, appears quickly, does not vesiculate nor pustulate, and is not accompanied by any severe constitutional disturbance.

Accompanying the eruption there is often a good deal of

swelling of the tissues, especially about the face and neck, and this is regarded as a favourable sign in itself.

The initial pyrexia which accompanies the onset of smallpox ceases when the papules come well out, an interval of apyrexia ensues, and then when the stage of maturation is reached—*i.e.*, when the papules go on to pustulation the temperature again rises, sometimes to an alarming extent. This is the *secondary fever* or *fever of suppuration.*

Smallpox is one of the most painful, as it is one of the most virulent of diseases; immunity from it can only be obtained by vaccination and re-vaccination.

9. Chicken-pox.—The eruption in chicken-pox is at first papular, but in a few hours from its appearance the individual papules become vesicular, and the rapidity with which this takes place is characteristic of the disease. Isolated vesicles are then to be seen scattered over the body, each of them about a split pea in size, and round or oval in shape. They stand out clearly and distinctly above the rest of the skin-surface, and their appearance has been compared to little blisters or to small drops of clear water. As a rule there is no halo round them after the first day or two; the halo may even be absent throughout the whole course of the eruption. They are irregular in distribution, but are common on the trunk and forehead and among the hair. They also occur on the soft palate, cheeks, and lips; but here they resemble the small superficial ulcers of ordinary stomatitis. They have been found on the mucous membrane of the prepuce in boys and of the labia in girls. Though rare on the palms and soles, they do occur there, and are apt to lead to confusion in diagnosis with smallpox.

A striking feature in the eruption of chicken-pox is that the vesicles are very superficial as compared with those of smallpox; and though they are at first multilocular, the septa soon disappear, and they become in their later stages unilocular. Their fluid contents next assume an opalescent hue, or are changed into thin pus; and as the pustules rupture their contents dry up and form thin brownish crusts, which are often firmly adherent. The vesicles appear in successive crops for the first two or three days, so that on the same individual papules, vesicles, and crusts may all be found side by side at the same time.

In itself chicken-pox is a mild disease, running a comparatively rapid course, and attended with but little constitutional disturbance. A little headache or drowsiness, a slight rise in temperature, a loss of appetite (not, however amounting to nausea), may be all that can be detected; and even this passes off as the eruption develops. It is exceptional to find shivering, or sickness to any extent; and grave phenomena, such as delirium or convulsions, are very rare.

The infectivity of chicken-pox is in the crusts of the pustules, and so long as these are present the patient must be regarded as being capable of spreading the disease. It is very infectious.

Chicken-pox may be mistaken for acne in its early stage, for *Molluscum contagiosum*, or for smallpox. It is evident that if the latter disease were diagnosed as chicken-pox, the mistake would be one of vital importance, as little attention might be paid to the isolation and disinfection of a patient, who thus might be the means of lighting up a conflagration of the most serious and extensive nature.

The points to be relied upon in distinguishing the two diseases are these—

	Chicken-pox.	*Smallpox.*
Constitutional disturbance:	Slight.	Severe.
Pyrexia:	Slight.	Well marked.
Appearance of eruption:	First day.	Third or fourth day.
Character of vesicles:	Superficial.	Deep-seated.
Occurrence:	Come in crops.	Practically in one crop.
Situation:	Sparse on face.	Most on face.
	Rare on palms and soles.	Common on palms and soles.
Course:	Comparatively rapid.	Slowly progressive.
Crusts:	Small; thin.	Larger; thick.
Swelling:	Little or none.	Often great.

It is to be remembered that *both* eruptions may be characterized by umbilication, though this is commoner in smallpox than in chicken-pox. Further, *both* eruptions may occur on palms and soles, though this also is commoner in smallpox than in chicken-

pox. It may be remarked, in conclusion, that (notwithstanding the differences pointed out here) to distinguish between a case of chicken-pox and a mild case of smallpox occurring in a person previously vaccinated is sometimes one of the most difficult, as it is one of the most important, problems which can come before the practitioner in the daily practice of his profession.

10. Relapsing Fever is, as a rule, unaccompanied by any rash, but in rare cases an eruption of spots somewhat resembling those of measles, or of a reddish indistinct mottling like that of typhus, has been observed. Throughout its existence it disappeared on pressure, and finally faded within three or four days of its first appearance. Sudamina are common, as might be expected, and desquamation often follows the attack.

CONSTITUTIONAL DISEASES ATTENDED BY SKIN-ERUPTIONS.

Sundry constitutional diseases do occasionally manifest, in the course of their development, one or more primary or secondary skin-lesions; and a short reference to these may not be without interest to the student of skin disease.

Cholera is occasionally accompanied by a bright scarlet or crimson rash, which may have, in addition, some of the characters of urticaria with it. Its appearance is attended by a rise in the temperature of the patient. It occurs chiefly on the back of the hands and the forearms, but may extend over the whole body, invading even the face. It occurs usually in children or young adults, lasts for three or four days, and is followed by desquamation. Its appearance is regarded as favourable to the patient.

Dengue is peculiar in that its course is marked by the appearance of *two* rashes; the first is a true erythema fugax, consisting of bright red patches which appear irregularly over the body, and which fade after lasting only an hour or two; the second rash appears three days or thereby after the first, and resembles the erythema which sometimes accompanies an attack of acute rheumatism. Sometimes it is mixed up with an eruption of pomphi or bullæ, and there is always present a considerable degree of tingling and itching. The eruption appears first on the

palms, and then on the knees and feet; it is rare to find it extending over the whole body. It lasts for two or three days, and is followed by "branny" desquamation.

EPIDEMIC MENINGITIS is sometimes associated with polymorphic cutaneous eruptions. On the face this takes the form of an extensive bilateral herpetic eruption; but on the trunk or limbs it is oftener an erythema, purpura, or urticaria. All three primary lesions, as well as the secondary one, may be present in the same individual at the same time.

MIGRAINE may be associated with (*a*) localized patches of *greyness of the hair*, or of actual *baldness* in the region supplied by the affected nerve; (*b*) an eruption like that of erysipelas, in which the swelling is marked; or (*c*) *xanthelasma* of the eyelids.

Purpura as a distinct disease has already received consideration. Hæmorrhages, into or beneath the skin, however, also occur in *scurvy*, *smallpox*, and *measles; hæmophilia*, *Hodgkin's disease*, *ulcerative endocarditis*, and *cirrhosis of kidney*. Of these, however, only one will receive attention in this place, and that is SCURVY. In scurvy an eruption of red or purple spots, each of small size and slightly raised above the surface, appear first upon the lower limbs, and later on the arms and trunk, but, as a rule, not upon the face. Subcutaneous hæmorrhages of considerable extent and indefinite outline are mixed up with the smaller spots; these readily suppurate and form large irregular ulcers, from which a thin bloody fluid exudes. Bullæ may be formed, whose contents are mixed with blood, and when these rupture and their contents dry up the resulting crusts are dark in colour and firmly adherent at their edges.

Hæmorrhages also take place into the joints and muscles, and bleeding from the gums and lips, swelling of the tongue, and great fœtor of the breath are apt to occur. (Compare with *Hæmorrhagic Smallpox*, page 97).

ANTHRAX, SPLENIC FEVER, or MALIGNANT PUSTULE, is a disease due to the presence of a fission fungus, the *Bacillus anthracis*, in the blood of those affected. These bacilli are motionless rods 5 to 20 micro-millimetres in length, and from 1 to 2 micro-millimetres in breadth, and they divide when they have grown to about double their ordinary length. Reproduction is by spores.

The disease may be communicated to man when the bacilli by any means obtain entry to the circulatory system. This is commonly brought about by the presence of abrasions or fissures in the skin of those who come in contact with it; and in this way it may be directly transmitted from distant regions to workers at home through the handling of infected articles on their arrival in this country. Those who deal in hides and hair are likely to become infected readily; workers in Russian horse-hair in particular (see report by Dr. J. B. Russell in 1879). Makers of sundry kinds of paper are also liable to contract it, and the "wool-sorter's disease," so common in Bradford, is now well-known to be identical with anthrax.

The *skin-lesions* in anthrax begin with a stinging or burning sensation in the affected part, followed quickly by the appearance of a single papule, which increases rapidly in size, and then becomes vesicular. A series of smaller vesicles often appear close to the original one, which now ruptures and dries into a dark-coloured scab. The area around it becomes swollen, hard, and brawny, and of a dark purple colour, and involvement of the lymphatic vessels and nearest lymphatic glands follows quickly. Usually within a couple of days from the appearance of the first papule, high fever, with delirium, diarrhœa, and intense prostration ensue; great pain in the limbs is complained of, and the patient sinks rapidly.

Some authorities hold that anthrax may occur in man as a result of *eating the flesh* of an infected animal, and *Leube* of Jena has recorded such a case. *Heusinger* believes the disease may even be communicated to man by consumption of the milk of an infected animal, or of the butter made from such milk.

Glanders is an affection, chiefly of horses, asses, and mules, and in them is characterized by the formation of nodules and pustules below the skin, and by inflammation and swelling of the lymphatics and lymph glands. It is due to the presence of a fission-fungus, the *Bacillus mallei*, in the blood, and *fresh* nodules of the host. Each bacillus resembles closely that of tuberculosis, but is broader than the latter, and absorbs aniline stains more slowly than it.

The disease may be communicated to man, and in him may assume either an *acute* or a *chronic* manifestation. In both an

eruption appears, but in the acute form, as might be expected, the eruption develops more quickly than in the chronic. It has the following course :—

When a fissure or wound has been infected the tissues in the neighbourhood become red, swollen, and painful, so much so indeed, as to present a close resemblance to an ordinary attack of erysipelas. This is followed by the appearance on the body and limbs of a series of flat papules, which quickly pass, first into the vesicular, and then into the bullate stage, and finally pustulate. These pustules become depressed in their centre, rupture, and discharge a thin acrid pus which is often mixed with blood. This eruption may develop within forty-eight hours of the receipt of infection, or it may be delayed for as long as a week. It is often accompanied by the formation of a series of painful subcutaneous nodules like those which occur in horses when attacked by this disease.

The eruption of glanders is apt to be mistaken in its early stage for erysipelas, chicken-pox, or smallpox, and later for pemphigus or ecthyma.

Foot-and-mouth Disease—*Eczema epizooticum*—is an affection of sheep and cattle characterized by the formation of vesicles and bullæ upon the mucous membrane of the lips, mouth, and tongue ; these vesicles soon rupture and expose a series of ulcers whose floors are covered with thick grey sloughs. Similar vesicles appear on the feet, and round the inner edging of the hoof ; also on the teats and udder, in both of which situations the surface is apt to become raw and bleeding. The vesicles pustulate, rupture, and dry into scabs in the usual way.

The disease may be communicated to man by (a) *direct inoculation*, as into a fissure or excoriation in the hand of a milker, or (b) *by drinking the milk* of a diseased cow.

Persons affected rapidly develop vesicles on the inner surfaces of the lips, and on the tongue and palate. These are about the size of peas, pustulate, and rupture on the second or third day from their formation, leaving a shallow deep-red ulcer behind. A similar eruption appears on the fingers at the roots of the finger-nails, and on the feet, in the spaces between the toes.

Klein, in the Eighth Annual Report of the Local Government

Board (1878-79) describes a streptococcus which he has found to be associated with this disease.

Influenza in its epidemic form has been declared by some observers to be occasionally accompanied by an eruption which sometimes resembles that of scarlet fever, and sometimes that of measles. This statement must, however, be accepted with reserve; further observation on the point is necessary.

Savill of London has recently described a *new epidemic skin disease* (as yet unnamed) which has the following characters:—

It commences usually upon the exposed parts of the body, as an erythema, but quickly passes on to the formation of papules, vesicles, or scales. It is attended by a variable degree of constitutional disturbance, but there is no pyrexia; it occurs wholly in persons above middle age. It runs a course of from seven to eight weeks in duration, and is followed by well-marked, and sometimes even extensive, desquamation. It seems to be contagious, and to be associated with the presence of a micrococcus in the serum of the vesicles. In the early stages at least it appears to be amenable to control by the application of appropriate germicide remedies.

In Addison's Disease there is a bronzing of the skin which calls for some notice. The disease is remarkable for the increasing weakness, going on to prostration, which is one of its features, and for the dark colour of the skin which, as the condition grows worse, becomes yellowish-brown or greenish-black in tint. This is first seen and is most marked where the pigment is naturally deep, as inside the mouth, especially on the cheek, and toward the lower molar teeth. The eyelids, axillæ, areolæ of nipples, and pudenda are early affected. *The conjunctivæ remain white and pearly.*

The disease is incurable; remissions occur, but they are temporary.

In Jaundice the conjunctivæ partake of the yellowish-brown colouration of the skin. Bile is possibly present in the urine, and absent from the motions, and pain over the hepatic region may be complained of.

ERUPTIONS PRODUCED BY DRUGS.

In the consideration of eruptions produced by the administration of medicines the observer is at once brought face to face with one of the most puzzling, as it is one of the most obscure, phenomena he has to deal with in ordinary practice. Idiosyncrasy is a convenient term whereby we are enabled to dismiss once for all some peculiar manifestation in a particular patient without obtaining any accurate knowledge as to why that manifestation should occur. Why, for instance, a medicine, which in one patient can be administered for weeks together without producing any appreciable effect upon the skin, should, in another, give rise to an extensive, it may be a disfiguring, eruption, we at present have no means of knowing, and are therefore totally unable to explain. We have therefore to content ourselves by saying that that particular patient must have an idiosyncrasy to that particular drug.

1. *Belladonna.* The administration of belladonna is not infrequently followed by the appearance of a bright universal erythema closely resembling that of scarlet fever. The application of a belladonna plaster has been known to produce it, and the writer has seen the local application of belladonna extract with glycerine, together with the internal administration of the tincture, produce a rash so brightly scarlet as in itself to be hardly distinguished from that of scarlet fever. Dilatation of the pupils, dryness of the throat, a tendency toward delirium, and the history of the administration of the drug, will accompany the rash due to belladonna. The absence of pyrexia (which might, however, be present, though due to the disease for which the patient is under treatment), of enlargement of the angle-glands, of strawberry tongue, and of other symptoms associated with scarlet will assist in the diagnosis.

2. *Hyoscyamus* and *Stramonium*, the allies of belladonna, have been described as producing similar rashes, but although the writer has used both drugs largely in hospital practice, he has failed to note a single eruption that could be said to be produced by either.

3. *Quinine.* There seems to be no doubt that this most valuable drug occasionally produces an eruption closely resembling that of scarlet fever. Other eruptions, more or less resembling that of urticaria have also been noted; occasionally a series of purpuric rashes, and, very rarely, a series of vesicles have also been seen; but it is questionable if the latter, at least, could be correctly attributed to the use of the drug.

4. *Antipyrine* has been blamed for the production of an extensive erythema; but as the observed cases were those of acute rheumatism, in which it is not uncommon to find an erythema apart from the administration of any drug whatever, it is at least open to doubt whether this remedy was at fault in these particular instances.

5. *Tar* and the *tar-derivatives* are well known to act as skin-irritants. Indeed this is in part the rationale of their use in sluggish and indolent affections of the skin. They are apt to produce an acne, however, which is very irregular in distribution; this, the history of the administration of the remedy, and the disappearance of the acne when its use is discontinued, are sufficient to distinguish the false from the true variety.

Creoline, a tar-derivative, occasionally produces a scarlet-like rash. In an instance which came under the writer's notice the patient, a man of twenty-five, had taken 5 minims of creoline in capsule three times daily, until he had 40 minims of the remedy. The following is from the ward journal:—

"A feature in this patient's condition is the appearance to-day of a scarlet-looking rash unaccompanied by any other sign of scarlet however (no headache, no sickness, no vomiting, no enlargement of glands). This rash fades a little slowly on pressure, is punctiform over the loins, but over the scapular region is one uniform pinkish-purple blush. It is punctiform in appearance also over the chest and abdomen, although here the manifestation is not so pronounced as on the back. It is absent from the face, thighs, and legs, and on the arms is only present on the space in front of the elbow. The rash is uniform with the skin (not raised) and is not itchy. The patient's tongue is dry and brown as before, and presents no strawberry characters; and he has no sore throat."

That same afternoon the rash is noted to have become raised to the touch in some places, especially over the front of the neck and chest. The administration of the creoline was discontinued.

Next day the rash was still in full bloom, and was slightly more marked in front of the elbows. The patient, who was acutely ill with enteric fever, did not appear affected by the rash, except that on the second day of its presence his temperature was actually lower in the morning than it had previously been.

On the third day the rash was noted as being still very bright upon his loins, but fading somewhat on the shoulders.

On the fifth day the eruption was fading steadily; all over it was much less vivid; on the front of the chest and between the shoulders it had almost gone. Elsewhere it remained no longer raised above the skin. The patient ultimately made a good recovery.

An interesting feature in the case was that the patient exhibited, to begin with, a fairly profuse eruption of typical enteric rose-spots; these were lost among the punctate spots of the new rash as it developed, and reappeared as it subsided.

6. *Turpentine* and *Petroleum* are credited with the production of an erythema somewhat like that due to belladonna; and *impure vaseline*, instead of being bland and soothing, acts as a very efficient irritant, sometimes even producing pustules, especially on the skin of delicate children (*Love*).

7. *Chloral hydrate* not infrequently causes an eruption to appear upon the skin of those in whom the remedy is being pushed. The rash, as a rule, bears a close general resemblance to that of measles, occurring, as it does, in isolated spots, which join at their edges, and are of a purple or bluish hue. Like measles, too, the spots are raised to the touch, and are not itchy. But a chloral rash is usually unaccompanied by any rise in temperature; it is preceded by none of the early symptoms so characteristic of measles; it is of a darker colour and more erratic distribution—that is, more patchy and less universal—than a measles rash; and it is associated with a history of the administration of the drug. In addition, the chloral rash is not infrequently accompanied, especially in regions where there has been much previous skin-irritation, by an erythema which closely resembles that of scarlet. The staining after its

subsidence is not so pronounced as in measles, and in cases that came under the writer's notice there was no subsequent desquamation. Notwithstanding these points of difference, it is often by no means easy to say whether a patient with such a rash, who has been taking chloral and who has been recently exposed to the infection of measles, is suffering from mild measles, or has a chloral rash, or is under the influence of both.

8. *Cannabis Indica* occasionally produces a scarlet-like erythema of considerable extent.

9. *Copaiba* produces a dark-coloured papular rash not unlike that due to chloral or well-marked measles; and, as it, like both of these, may appear upon the face (though seldom first there), the diagnosis, if it rested on the rash alone, might often be difficult. A copaiba rash is, however, usually accompanied by a good deal of itching, and pomphi may be present, as in urticaria. The dark colour of the rash, the absence of pyrexia, the existence of the disease for which copaiba is usually given, the itchiness of the eruption, are points among others that will assist in the diagnosis.

10. *Bromide of potassium* is well known to cause, in some instances, an eruption upon the skin closely simulating that in *Acne vulgaris*. The bromide rash may be papular, vesicular, or pustular when first seen, but its course is much more acute than that of an ordinary acne. It has no pyrexia with it; occurs on sites very rarely affected by acne, which limits itself to the face and shoulders; and also differs from acne by occurring at any age, provided only the patient is taking the drug. It is not connected with the retention of sebum; and, if sufficiently acute, may go on to form an undoubted case of eczema. The following instance in a child of eight months, apparently free from syphilis, and who was taking full doses of the drug, may be of interest:—

There appeared, first upon the back, a discreet papular rash, which next day became vesicular, and then pustular. The intermediate skin was of a bright scarlet hue, which faded on pressure. Each papule was minute, being about the size of the smallest pinhead. The rash was profuse upon the back, buttocks, arms, and legs, discreet upon the chest and abdomen, and quite absent from the face, feet, and hands. The eruption gradually subsided when

the administration of the drug ceased, and it was followed by flaky desquamation. It was unassociated with any gastro-intestinal disturbance; the mouth was cool, the tongue clean, and there was no rise in temperature. The infant was, during the whole period, quiet and good-tempered.

11. *Iodide of potassium*, like the bromide, may be the apparent cause of a variety of skin-lesions, but these are usually more numerous and more severe than when the bromide is to blame. Extensive erythema, with papules, vesicles, or pustules, may occur; and it is not uncommon to find the face, particularly the eyelids and cheeks, bloated and swollen. There may be conjunctivitis and a purulent discharge from the eyelids. Like most drug-eruptions, the iodide rash is free from itching; and its variety of form may lead to the belief that syphilis is present, a disease for which this drug is frequently prescribed. The usual procedure is to *double the dose* of the drug, after which the rash and other symptoms disappear.

The disease most apt to be confounded with the symptoms caused by bromide or iodide of potassium is smallpox.

12. *Arsenic* is a drug frequently used in the treatment of psoriasis and in the later and dry stages of eczema; and to be of benefit it may be necessary to give the remedy in full doses. Sometimes its administration is attended with unpleasant effects, which call for a diminution in the dose, but not for its entire discontinuance. When thirst, headache, disturbed sleep, puffy swelling of the eyelids, salivation, and silvery coating of the tongue occur, singly or in combination, it will be judicious to diminish slightly the amount of the drug in each dose; should diarrhœa, vomiting, or albuminuria ensue, the medicine should be discontinued for a few days, and then resumed in smaller doses.

Vesicular and herpetic eruptions have been described as associated with the internal use of arsenic in its various forms; but these are comparatively rare.

13. *Nitrate of silver* is occasionally given in the form of pill in cases of epilepsy. It has the objection that its continued use leads to a permanent staining of the parts of the skin exposed to the action of light. An instance is quoted by *Hilton Fagge* in which a patient's skin became so discoloured as to resemble a surface

polished with blacklead; and most atlases of skin disease contain illustrations of the condition. It is rarely met with in actual practice, as this drug is now seldom given internally.

14. *Croton oil* applied externally produces a general erythema, which is quickly followed by crops of pustules of varying size. It is attended with intense itching or burning pain. The pustules are at first minute; but there are so many of them that they soon coalesce at their edges, and form ultimately large blebs, each of which contains a thin yellow purulent fluid. The erythema is a *dusky* redness, fades slowly on pressure, and quickly returns.

Extension of the inflammatory condition beyond the site to which the remedy was originally applied is common, and copious desquamation follows.

Red flannel underclothing in which the dye is not fast may give to the skin an appearance very closely resembling the eruption of scarlet fever.

It is safe to say that if with a rash, no matter how extensive it may be, there is during the whole twenty-four hours an absence of pyrexia, and the patient continues to eat well and to sleep undisturbed, the question of the exanthemata as a rule may be safely dismissed, and other causes looked for.

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BIBLIOGRAPHY.

Occasional reference has been made in the preceding pages to the following :—

Maladies de la Peau, P. Rayer, Bruxelles, 1836
Leçons sur le Maladies de la Peau, Hardy, Paris, 1860
Maladies des Enfants, Rilliet et Barthez, Paris, 1861
Hebra and Kaposi on Diseases on the Skin, New Sydenham Society, 1880
Theory and Practice of Medicine, Bristowe, Smith, Elder & Co., 1882
Manual of Surgery, Bryant, Churchill, 1884
Histology of the Eye, C. Fred. Pollock, M.D., Churchill, 1886
MS. Notes of Lectures by Professor M'Call Anderson, M.D., 1886
MS. Notes of Lectures by Professor Samson Gemmell, M.D., 1886
MS. Notes at Glasgow Skin Dispensary, 1886
Diseases of the Skin, Professor M'Call Anderson, M.D., 1887
Manual of Pathology, Coats, Longman, 1887
Diseases of the Skin, H. Radcliffe Crocker, M.D., 1888
Micro-Organisms, Dr. C. Flügge, New Sydenham Society, 1890
Treatment of Skin Diseases, J. Allan Jamieson, Pentland, 1891
Principles and Practice of Medicine, Fagge, Churchill, 1891
The Bath in Diseases of the Skin, Milton, Chatto and Windus, n.d.